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CONDITION SURVEY REPORT ROBINS AIR FORCE BASE, GEORGIA

by

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Waterways Experiment Station, Corps of Engineers
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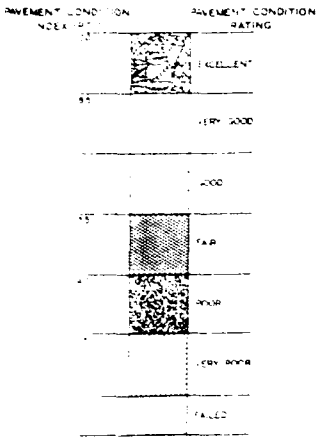
US Army Corps of Engineers



GEOTECHNICAL LABORATORY

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A pavement condition survey was performed at Robins Air Force Base, Georgia, in November 1988 for the purpose of determining the pavement condition index of the airfield pavement features and for amending the PAVER pavement management system data base created in 1979.

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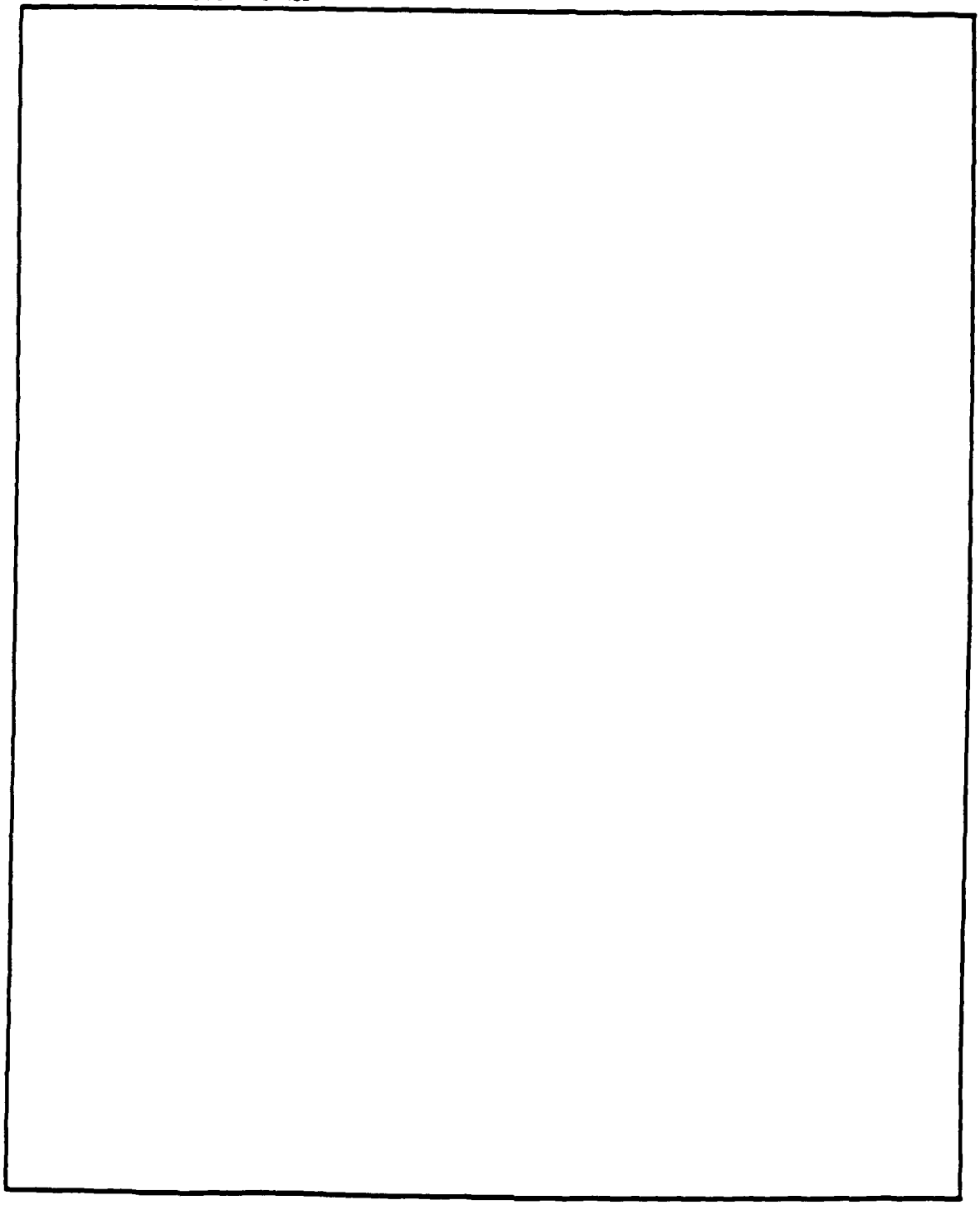
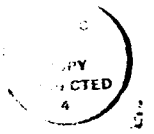


PREFACE

The condition survey described in this report was requested by Military Interdepartmental Purchase Request No. FQ285381721086 dated 21 June 1988 from the 2853rd CES/DEU Robins Air Force Base, Georgia, to the US Army Engineer Waterways Experiment Station (WES), Vicksburg, Miss.

The condition survey at Robins Air Force Base was performed by a WES condition survey team during the period 9-15 November 1988. The team consisted of Messrs. R. A. Bentsen, J. A. Harrison, P. S. McCaffrey, Jr., and D. D. Mathews, Pavement Systems Division (PSD), Geotechnical Laboratory (GL). This report was prepared by Messrs. Bentsen and Mathews under the supervision of Messrs. R. W. Grau, Chief, Prototype Testing and Evaluation Unit, PSD, and H. H. Ulery, Jr., Chief, PSD. The work was accomplished under the general supervision of Dr. W. F. Marcuson III, Chief, GL, WES. Mrs. J. Walker, Information Products Division, Information Technology Laboratory, edited the report.

Commander and Director of WES during preparation of this report was COL Larry B Fulton, EN. Dr. Robert W. Whalin was Technical Director.



CONTENTS

CONVERSION FACTORS, NON-SI TO SI (METRIC)
UNITS OF MEASUREMENT

Non-SI units of measurement used in this report can be converted to SI (metric) units as follows:

Multiply	By	To Obtain
feet	0.3048	metres
inches	2.54	centimetres
pounds (force) per square inch	6.894757	kilopascals
square feet	0.09290304	square metres
square yards	0.8361274	square metres

CONDITION SURVEY REPORT, ROBINS AIR FORCE BASE, GEORGIA

PART I: INTRODUCTION

Background

1. This report describes the airfield pavement condition survey of Robins Air Force Base (AFB), Georgia. The condition survey was performed in accordance with AFR 93-5*, and the data will be used to supplement past condition survey data to provide base engineers with the information required for making pavement management decisions concerning costs and maintenance requirements. The condition survey data were input into a PAVER pavement management system data base for future analysis. The condition survey was performed by the US Army Engineer Waterways Experiment Station (WES) during the period 9-15 November 1988.

Objective and Scope

2. The overall objective of this project was to determine the pavement condition of the airfield pavements at Robins AFB and input the information into the mainframe computer PAVER data base which had been created following a condition survey performed by base personnel in 1979.** The inclusion of the data from this condition survey into the PAVER data base will allow the base engineers to determine the amount of deterioration which has occurred since the previous survey and to assist them in making future pavement management decisions. This objective was accomplished by:

a. Performing a condition survey of the pavements in accordance with AFR 93-5.

b. Inputting the condition survey information into the mainframe PAVER data base to calculate a pavement condition index (PCI) of the pavement features.

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* Headquarters, Department of the Air Force. 1981 (May). "Airfield Pavement Evaluation Program," Air Force Regulation AFR 93-5, Washington, DC.

** "Airfield Pavement Condition Survey Report, Robins Air Force Base, Georgia," December 1979, Air Force Logistics Command, DCS/Civil Engineering.

c. Producing detailed drawings of the pavement features to ensure that future condition surveys will be performed on the same pavement locations as the one performed for this report.

The condition survey data in the mainframe PAVER data base was also input into a Micro PAVER data base which is stored on a personal computer. The Micro PAVER pavement management system can perform much of the same analysis as mainframe PAVER, but does not accrue the mainframe computer costs.

PART II: PAVEMENT CONDITION SURVEY

Introduction

3. A pavement condition survey is performed to determine the present surface condition of the various pavement features of an airfield. The procedure used in performing the condition survey was developed by the US Army Corps of Engineers and has been accepted as a regulation by the US Air Force. The knowledge of the condition survey procedures discussed in AFR 93-5 is required for the use and understanding of this report.

Pavement Definition and Identification

4. The pavement network is divided into three specific units to perform the condition survey and manage the pavement network effectively. The three units of division are the feature, the section, and the sample unit. The feature designations of Robins AFB were established in the 1979 condition survey report and are shown in Figure 1. Feature designations are made under strict guidelines and any changes to them must be highly justified. Locating the features on the airfield itself is necessary before the performance of the condition survey can proceed.

5. Eight features shown in Figure 1 have been designated or constructed since the 1979 condition survey, and one feature was eliminated by the new construction. The runway overruns (features R12X and R13X) and Taxiway 3C (T40C) have been included in the current condition survey. The construction of the F-15 maintenance facilities (T41C, T42C, A19B, and A20B) eliminated the power check pad (T31C). The dangerous cargo apron (A21B) has also been constructed. The physical property data for these new features as well as for the previously designated features are given in Table 1. Locations of typical cross sections are given in Figure 2, and the cross sections illustrations are given in Figures 3-10.

6. After each pavement feature has been defined, further division of the feature may be required for reasons such as traffic flow. The further division of features is done into sections. For instance, an apron may contain taxilanes which the aircraft follow to their parking locations, and this section would differ from the areas used for the actual parking of the

aircraft. Therefore, this feature would be divided into sections. Note that, if a feature requires no division, for definition purposes it is still considered to contain one section. The feature designations made in the 1979 condition survey contained no section divisions.

7. After the pavement feature and section definition has been completed, the section is divided into sample units, which are conveniently sized areas of pavement on which the inspection is performed. A sample unit on asphalt concrete pavement is 5,000 sq ft* in area; whereas, a sample unit on portland cement concrete (PCC) pavement consists of 20 slabs. Note that a pavement section is divided into sample units for condition survey purposes only. Recognizing that not all sample units will fit the 5,000 sq ft or 20 slab criteria, deviations of 25 percent on either side of these values are allowed for survey purposes.

8. When a section has been divided into sample units, it has been properly prepared for the survey. An inspection of all of the sample units within a section could require a considerable amount of time. Therefore, the random sampling method was developed to provide an adequate calculation of the PCI while inspecting only a portion of the sample units in a section. The method, further defined in AFR 93-5, allows for a reduction in the number of the sample units surveyed without a significant loss of accuracy in the calculation of the PCI. It should be noted, however, that the inspection of all the sample units may be necessary for estimation of maintenance and repair work.

9. The sample unit divisions for the features at Robins AFB were performed for the 1979 condition survey. An essential concept in pavement management is determining the deterioration of the pavement surface over time. The PCI is used in the PAVER system to determine this deterioration. Determining the PCI of a pavement section at different time intervals requires that the same sample units of the section be surveyed to get a precise idea of the deterioration rate. Therefore, the sample units which were surveyed in 1979 were surveyed in the conduct of this condition survey. Drawings of each of the pavement features and any section divisions have been included in this report to illustrate the sample units within each feature to permit future condition surveys to be conducted at these same locations. Figures 11-52

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* A table of factors for converting non-SI units of measurement to SI (metric) units is presented on page 3.

illustrate the sample unit layouts for each of the features at Robins AFB. The circled numbers in these figures indicate the sample units that were surveyed.

Pavement Inspection

10. The performance of a condition survey consists of inspecting the pavement surface for various types of distresses, determining the severity of each distress found, and measuring the amount of distress within the sample unit. Distress quantities on asphalt pavement are measured in either linear feet or square feet within the sample unit; whereas, those on PCC pavement are measured by counting the number of slabs affected within the sample unit.

11. The product of the condition survey is the PCI of the sample unit. The PCI is a value from 0 to 100 (worst to best, respectively) of the surface condition of the pavement. The PCI is obtained by determining a deduct value for the amount of each distress type and severity found in the inspection, determining a corrected deduct value for the combined effect of various distresses on the pavement condition, and subtracting the corrected deduct value from 100. A pavement with no distress has a PCI of 100 with varying amounts of distress decreasing the PCI value to a possible low of 0. Pavement condition ratings (excellent to failed) are assigned to different levels of PCI values; these ratings and their respective PCI value definitions are shown in Figure 53. The PCI of the pavement section is calculated by averaging the PCI's of the sample units surveyed.

12. The majorities of the pavement features at Robins AFB are rated from fair to excellent condition with some features rated poor. Figure 54 illustrates the condition ratings of the features at Robins AFB, and the PCI of each feature is included in Table 1. Table 2 describes the more prominent distresses observed in each feature. Photos 1 through 26 show various distresses that were observed on the airfield pavements. Table 3 compares the 1979 PCI with the current PCI.

General comments

13. The pavements at Robins AFB are kept in favorable condition utilizing an aggressive maintenance by the base engineering personnel. Relatively few spalls or cracks exist in the PCC pavement; the repairs of these problems are evident in the amount of patching recorded in the condition survey. Most

of the PCC pavements exhibit hairline shrinkage cracks in the surface that appear to be the onset of crazing. However, most of the PCC pavements were constructed between 1942 and 1959, and these cracks were evident in the 1979 condition survey. Therefore, these fine cracks should not pose any problems in the frost-free climate native to Robins AFB.

Table 1

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY					OVERLAY PAVEMENT			PAVEMENT			BASE			SUBBASE				SUBGRADE	
FEATURE	IDENTIFICATION	LENGTH (FT)	WIDTH (FT)	GENERAL CONDITION PCI	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	CBR % / K PSI/IN	THICKNESS (IN)	DESCRIPTION	CBR %	DESCRIPTION	CBR % / K PSI/IN
R1A	Runway 14-32 Sta 125+00-130+00 Sta 127+50-130+00	 500 250	 200 100	 Good 63				20	PCC	825							SC	300
R2A	Runway 14-32 Interior Portion Sta 120+00-125+00	 500	 100	 Good 61				19	PCC	825							SC	300
R3A	Runway 14-32 Interior Portion Sta 116+00-120+00	 400	 100	 Fair 46				16	PCC	825							SC	300
R4A	Runway 14-32 Interior Portion Sta 111+00-116+00	 500	 50	 Fair 53				18	PCC	788							CH	200
R5A	Runway 14-32 Interior Portion Sta 106+00-111+00	 500	 50	 Good 70				18	PCC	788							CH	200
R6C	Runway 14-32 Interior Portion Sta 20+00-106+00	 8,600	 75	 Very good 79				17	PCC	727							SC with seams of CH	400
R7A	Runway 14-32 Sta 15+00-20+00	 500	 300	 Very good 71				15	PCC	735							CH	250
R8A	Runway 14-32 Sta 10+00-15+00	 500	 300	 Very good 74				15	PCC	735							CH	250
R9C	Runway 14-32 Exterior Portions Sta 116+00-125+00 Sta 116+00-127+50	 900 1,150	 100 100	 Good 67				14	PCC	825							SC	300

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Table 1 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY					OVERLAY PAVEMENT			PAVEMENT			BASE				SUBBASE				SUBGRADE	
FEATURE	IDENTIFICATION	LENGTH (FT)	WIDTH (FT)	GENERAL CONDITION PCI	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	CBR % / K PSI/IN	THICKNESS (IN)	DESCRIPTION	CBR %	DESCRIPTION	CBR % / K PSI/IN
R10C	Runway 14-32 Exterior Portions Sta 106+00-116+00	1,000	250	Good 67				15	PCC	735							CH	200
R11D	Runway 14-32 Exterior Portions Sta 20+00-106+00	8,600	225	Very Good 71				4	AC		6	Water bound Macadam	80	7	Stabilized subbase	35	SC to SC-SM	15
R12X	Runway 14-32 Overrun	150 850	300 300	Very Good 63				2	AC DBST		7 9	Crushed aggregate	80	8	Crushed PCC	50	SC to SC-SM	25 (e)
R13X	Runway 14-32 Overrun	150 850	300 300	Very Good 64				2	AC DBST		7 9	Crushed aggregate	80	8	Crushed PCC	50	SC to SC-SM	25 (e)
T1A	Interior Portion Taxiway 1A	885	75	Poor 32				15	PCC	735							SM	350
T2A1	Interior Portion Taxiway 1	3,710	75	Very Good 74	9	AC		7	PCC	560							SM	350
	Exterior Portion Taxiway 1	3,710	75		2-8	AC		7	PCC	560							SM	350
T2A2	Interior Portion Taxiway 3 Sta 20+00-32+10	1,210	75	Very Good 77	10	AC		7	PCC	560							SM	350
T3A	Interior Portion Taxiway 3 Sta 3+00-20+00	1,680	75	Very Good 77	10	AC		7.5	PCC	560							SM	350

WES FORM 1 JAN 83 1000 * (e) = estimate

Table 1 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY					OVERLAY PAVEMENT			PAVEMENT			BASE			SUBBASE			SUBGRADE	
FEATURE	IDENTIFICATION	LENGTH (FT)	WIDTH (FT)	GENERAL CONDITION PCI	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	CBR % / K PSI/IN	THICKNESS (IN)	DESCRIPTION	CBR %	DESCRIPTION	CBR % / K PSI/IN
T4A	Interior Portion Taxiway 3 Sta 0+00-3+00	300	75	Good 64	10	AC		8.5	PCC	560							SM	350
	Exterior Portion Taxiway 3	1,980	75		2-8	AC		7.5 to 8.5	PCC	560							SM	350
T5A	Interior Portion Taxiway 4	4,020	75	Very Good 76	2	AC		5	AC		8	Water bound Macadam	80	7	Stabilized Subbase	35	SM	25
	Exterior Portion Taxiway 4	4,020	100		1	AC		2	AC		6	Water bound Macadam	80				SM to SC	25
T6A	Interior Portion Taxiway 4A	700	75	Very Good 77				15	PCC	735							SM	350
T7A	Interior Portion Taxiway 7A	1,042	75	Good 64				20	PCC	800							SM to SC	350
T8A	Interior Portion Taxiway 7	5,400	75	Good 64				20	PCC	800							SM to SC	350
T9A	Interior Portion Taxiway 6	2,450	75	Good 63				20	PCC	800							SM to SC	350
T10A	Interior Portion Taxiway 5	3,475	75	Very Good 72				20	PCC	800							SM to SC	350

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Table 1 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY					OVERLAY PAVEMENT			PAVEMENT			BASE			SUBBASE			SUBGRADE	
FEATURE	IDENTIFICATION	LENGTH (FT)	WIDTH (FT)	GENERAL CONDITION PCI	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	CBR % / K PSI/IN	THICKNESS (IN)	DESCRIPTION	CBR %	DESCRIPTION	CBR % / K PSI/IN
T11A	Interior Portion Taxiway 5A	1,023	75	Good 65				20	PCC	800							SM to SC	350
T12A	SAC Maintenance Apron Taxiway	Var	25 to 100	Good 66				20	PCC	750							SC	350
T13A	Interior Portion Taxiway B	3,155	75 and 100	Good 64				19	PCC	740							SM to SC	350
	SAC Shoulders	Var	Var					2	AC								SM	15
T14A	Interior Portion Taxiway 1B	755	50	Good 59				14	PCC	715							SM	300
	Exterior Portion Taxiway 1B South Side	755	25		2	AC		7	PCC	680							SM	300
	Exterior Portion Taxiway 1B South Side	755	25 to 62.5					5	AC		6	Stabilized aggregate	80				SM	300
	Exterior Portion Taxiway 1B North Side	755	62.5					5	AC		6	Stabilized aggregate	80				SM	300
T15A	Original Apron Taxiway	2,575	Var	Very good 75				6 and 14	PCC	750 Var							SC	300

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Table 1 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY					OVERLAY PAVEMENT			PAVEMENT			BASE			SUBBASE			SUBGRADE	
FEATURE	IDENTIFICATION	LENGTH (FT)	WIDTH (FT)	GENERAL CONDITION PCI	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	CBR % / K PSI/IN	THICKNESS (IN)	DESCRIPTION	CBR %	DESCRIPTION	CBR % / K PSI/IN
T16B	Intersection Taxiway 2A with Runway	340	Var	Very good 82				13	PCC	725							SC	300
T17B	Interior Portion Taxiway 2A	1,270	75	Excellent 98	10	AC		7	PCC	560							SM	350
	Exterior Portion Taxiway 2A	1,270	75		2-8	AC		7	PCC	560							SM	350
T18B	Interior Portion Taxiway 2	990	75	Excellent 99	10	AC		7	PCC	560							SM	350
	Exterior Portion Taxiway 2	990	75		2-8	AC		7	PCC	560							SM	350
T19B	Interior Portion Taxiway 3A	1,830	75	Very good 72	5	AC		4	AC		6	Water bound Macadam	80				SM	25
	Exterior Portion Taxiway 3A	1,830	100					2	AC		6	Water bound Macadam	80	7	Stabilized Subbase	35	SM	25
T20B	Intersection Taxiway 3A with Runway	175	Var	Very good 85				13	PCC	725							SC	300
T21B	Interior Portion Taxiway 6A	850	75	Very good 78				19	PCC	740							SC to SM	350

Table 1 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY					OVERLAY PAVEMENT			PAVEMENT			BASE			SUBBASE			SUBGRADE	
FEATURE	IDENTIFICATION	LENGTH (FT)	WIDTH (FT)	GENERAL CONDITION PCI	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	CBR % / K PSI/IN	THICKNESS (IN)	DESCRIPTION	CBR %	DESCRIPTION	CBR % / K PSI/IN
T22B	Intersection Taxiway 6A with Runway	121.5	Var	Very good 80				21	PCC	727							SC with seams of CH	400
T23B	Nose Dock Taxiway and Entrances	2,450	75	Fair 48				14	PCC	750							SM	350
T24B	Taxiway 1C	1,000	50 to 150	Fair 55				8.5	PCC	680							SM	300
T25C	Building 149 Access Taxiway	775	75	Very good 80				15	PCC	735							SM	350
T26C	Original Apron Taxiway East B/110/125	1,425	75 and 100	Very good 73				6 and 14	PCC	750 Var							SC	300
T27C	Original Apron Taxiway North B/110	150	100	Very good 72				6 and 14	PCC	750 Var							SC	300
T28C	Original Apron Taxiway West B/125	725	75 and 100	Good 68				6 and 14	PCC	750 Var							SC	300
T29C	Taxiway 3B	2,200	50	Excellent 89	4	AC		5	AC								SM	25 (e)
T30C	Intersection Taxiway 3B and North Apron	85	50	Excellent 100				3	AC			Graded crushed aggregate	80 (e)				SC	25 (e)

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Table 1 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY					OVERLAY PAVEMENT			PAVEMENT			BASE			SUBBASE			SUBGRADE	
FEATURE	IDENTIFICATION	LENGTH (FT)	WIDTH (FT)	GENERAL CONDITION PCI	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	CBR % / K PSI/IN	THICKNESS (IN)	DESCRIPTION	CBR %	DESCRIPTION	CBR % / K PSI/IN
T32C	Taxiway to B/45	235	50	Good 64				5	AC								SM	25 (e)
T33C	Taxiway to B/44	100	75	Good 57				13	PCC	760							SM to SC	350
T34C	Taxiway to B/55	175	75	Fair 41				13	PCC	760							SM to SC	350
T35C	Taxiway to B/48 and B/49	475	75	Good 60				14	PCC	715 (e)							SC or SM (e)	300 (e)
T36C	Taxiway to B/47	400	75	Good 58				14	PCC	715 (e)							SC or SM (e)	300 (e)
T37C	Taxiway to B/54	125	60	Poor 37				14	PCC	715 (e)							SC or SM (e)	300 (e)
T38C	Taxiway to B/89	125	50	Fair 41				14	PCC	715 (e)							SC or SM (e)	300 (e)
T39C	Taxiway 3D	1,385	50	Good 66	1	AC		5	AC								SM	25 (e)
T40C	Taxiway 3C	1,437	50	Good 66	1	AC		5	AC								SM	25 (e)

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Table 1 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY					OVERLAY PAVEMENT			PAVEMENT			BASE			SUBBASE			SUBGRADE	
FEATURE	IDENTIFICATION	LENGTH (FT)	WIDTH (FT)	GENERAL CONDITION PCI	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	FLEX STR. (PSI)	THICKNESS (IN)	DESCRIPTION	CBR % / K PSI/IN	THICKNESS (IN)	DESCRIPTION	CBR %	DESCRIPTION	CBR % / K PSI/IN
T41C	F-15 Maintenance Taxiway	180	50	Excellent 98				10	PCC								SC to SM (e)	300 (e)
T42C	F-15 Maintenance Taxiway	210	50	Excellent 92				10	PCC								SC to SM (e)	300 (e)
	Robins AFB Shoulders	Var	Var					2	AC		6	Graded crushed aggregate	80				SM to SC	25
A1B	South Warm-up Apron (SAC)	Var	300	Very good 74				19	PCC	800							SC	300
A2B	South Warm-up Apron-West Side of Runway	Var	Var	Very good 78				15	PCC	735							SM	350
A3B	SAC Maintenance Apron	2,175	750	Good 64				16	PCC	750							SC	350
A4B	North Apron	1,050	1,500 to 2,225	Very good 82				16	PCC	715							SM to SC	350
A5B	Northwest Apron	Var	500	Good 68				14	PCC	760							SM to SC	300
A6B	West Apron	1,450	300 to 700	Fair 50				15	PCC	640							SM to SC	300

Table 1 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY					OVERLAY PAVEMENT			PAVEMENT			BASE			SUBBASE			SUBGRADE	
FEATURE	IDENTIFICATION	LENGTH (FT)	WIDTH (FT)	GENERAL CONDITION PCI	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	CBR % / K PSI/IN	THICKNESS (IN)	DESCRIPTION	CBR %	DESCRIPTION	CBR % / K PSI/IN
A7B	North Warm-up Apron (SAC)	Var	300	Very good 76				19	PCC	800							SC	300
A8B	North Warm-up Apron West Side of Runway	Var	Var	Very good 83				15	PCC	735							SM	350
A9B	Alert Apron	Var	100	Good 69				19	PCC	740							SM to SC	350
A10B	Original Apron	Var	Var	Good 63				6 and 12	PCC	750 Var							SC	300
A11B	South Extension Apron	975	225	Good 58				6 and 12	PCC	750 Var							SM	300
A12B	B/149 Operational Apron	350 to 475	300	Excellent 86				15	PCC	715							SC to CH	300
A13B	B/149 Access Apron	Var	165	Very good 80				13	PCC	735							SM to SC	350
A14B	Old E-W Runway Used as Apron	1,125	150	Good 64				7	PCC	680							SM	300
A15B	Temporary Power Check Pad	301	50 to 100	Very good 82				9	PCC	715 (e)							SM to SC (e)	300

WES FORM 1 JAN 83 1000

Table 1 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY					OVERLAY PAVEMENT			PAVEMENT			BASE			SUBBASE			SUBGRADE	
FEATURE	IDENTIFICATION	LENGTH (FT)	WIDTH (FT)	GENERAL CONDITION PCI	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	FLEX. STR. (PSI)	THICKNESS (IN)	DESCRIPTION	CBR % / K PSI/IN	THICKNESS (IN)	DESCRIPTION	CBR %	DESCRIPTION	CBR % / K PSI/IN
A16B	Old Dangerous Cargo Pad	200	150	Fair 43				8.5	PCC	680							SC	300
A17B	Old Dangerous Cargo Pad	275	Var	Very good 74	3.5	AC		4	AC								SC	25
A18B	Air Freight Extension Apron	325 to 775	275	Good 70				12	PCC	715 (e)							SC to SM	300 (e)
A19B	F-15 Maintenance Apron	Var	Var	Excellent 88				10	PCC								SC to SM (e)	300 (e)
A20B	F-15 Maintenance Apron	Var	Var	Very good 85				10	PCC								SC to SM (e)	300 (e)
A21B	Dangerous Cargo Apron	1,220	Var	Excellent 93				16	PCC								SC to SM (e)	300 (e)

WES FORM 1 JAN 83 1000

Table 2

Character and Condition of Airfield Facilities, Robins Air Force Base

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
Runway 14-32	14,000 × 300 433,333	P and S	The runway PCC pavement is in fair to very good condition. Medium- to high-severity joint seal damage is present in all of the PCC surface, and very fine shrinkage cracks are evident in a majority of the slabs. Some degree of low-severity linear cracking exists in all of the runway features, with some cracks rating medium and high severity. Small and large patches of spalls and linear cracks are evident throughout the runway, the majority of which are low severity. A few joint and corner spalls which have not yet been repaired are present. The asphalt-surfaced shoulder and overrun features are in very good and good condition, respectively. Low-severity block cracking exists in virtually all of the overrun surfaces. The most prevalent distresses in the shoulder pavement are low-severity block and longitudinal and transverse cracking and also some medium-severity longitudinal and transverse cracking, bleeding, and patching.
Taxiway 1	3,710 × 75 30,917	P	This feature is in very good condition. Low-severity block, joint reflection, and longitudinal and transverse cracking were observed in the pavement surface.

(Continued)

* P = Primary; S = Secondary.

Table 2 (Continued)

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
Taxiway 1A	885 × 75 7,375	P	The PCC surface in this feature is in poor condition. High-severity joint seal damage exists throughout. All severity levels of linear cracking, small patches, large patches, joint spalls, and corner spalls are evident. Fine shrinkage cracks are present in virtually all of the slabs.
Taxiway 1B	755 × 50 4,194	P	This feature rated in good condition. The joint seal damage rated medium-severity, and most of the PCC slabs contained shrinkage cracks. All severities of small patches and joint spalls were observed as well as low- and medium-severity linear cracks and corner spalls and low-severity large patches.
Taxiway 1C	varies × varies 10,417	S	This feature is in good condition. The joint sealant categorized from low- and high-severity, rating worse in the closed portion leading to the original apron. Shrinkage cracks were evident in most of the PCC slabs. Low-severity linear cracks and small and large patches were also present. Observed in small numbers were all severities of corner spalls and large patches; low- and medium-severity corner breaks, joint spalls, and shattered slabs; and medium-severity linear cracks and small patches.
Taxiway 2	990 × 75 8,250	S	This AC taxiway was overlaid in 1988 and is in excellent condition.

(Continued)

Table 2 (Continued)

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
Taxiway 2A (T16B, T17B)	1,610 × varies 14,979	S	The asphalt portion of this taxiway was overlaid in 1988 and is in excellent condition. The PCC portion of this taxiway is in very good condition. The joint sealant condition rated low severity, and numerous shrinkage cracks were noted. Low-severity linear cracks, joints spalls, and small patches were also present.
Taxiway 3 (T2A, T3A, T4A)	3,190 × 75 26,583	P	This facility rated from good to very good condition. Low-severity block, joint reflection, and longitudinal and transverse cracking were observed in the pavement surfaces of all the features. The worse rating in T4A resulted from some cracking being rated medium severity.
Taxiway 3A (T19B, T20B)	2,005 × 75 17,333	S	The AC surface in this facility is in very good condition. Low-severity block and longitudinal and transverse cracking are the most prevalent distresses, with some medium-severity longitudinal and transverse cracking and low-severity patching present.
Taxiway 3B (T29C, T30C)	2,285 × 50 12,694	S	The AC-surfaced features in this facility rated in excellent condition. Low-severity longitudinal and transverse cracking and patching were observed.

(Continued)

Table 2 (Continued)

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
Taxiway 3C	1,437 × 50 7,983	S	This taxiway is in good condition. Low-severity block and longitudinal and transverse cracking were observed over most of the AC surface.
Taxiway 3D	1,385 × 50 7,694	S	This taxiway is in good condition. Low-severity block and longitudinal and transverse cracking were observed over most of the AC surface.
Taxiway 4	4,020 × 75 33,500	P	This taxiway is rated very good. Low- and medium-severity longitudinal and transverse cracking are evident in the AC surface as well as small amounts of low-severity rutting and alligator cracking.
Taxiway 4A	700 × 75 5,833	P	This feature rated in very good condition. Low- and medium-severity linear cracking, joint spalls, and small patches were evident in the PCC surface. Virtually all of the slabs contained fine shrinkage cracks in the surface.
Taxiway 5	3,475 × 75 28,958	P	This taxiway is in very good condition. Low-severity linear cracking, joint seal damage, and joint and corner spalls are evident, as are low- and medium-severity small patches. Shrinkage cracks are present throughout the PCC surface.

(Continued)

Table 2 (Continued)

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
Taxiway 5A	1,023 × 75 8,525	P	This taxiway is in good condition. Medium-severity joint seal damage and shrinkage cracks exist throughout the feature with some of the shrinkage cracks now considered low-severity linear cracks. Low-severity small and large patches and low- and medium-severity joint and corner spalls also exist in the PCC surface.
Taxiway 6	2,450 × 75 20,417	P	This taxiway rated in good condition. The joint sealant rated low-severity and shrinkage cracks existed throughout the PCC surface. Some of the shrinkage cracks deteriorated into low-severity linear cracks. Low- and medium-severity small patches were the most prevalent of the other distresses.
Taxiway 6A (T21B, T22B)	972 × 75 8,721	S	The PCC-surfaced features in this facility rated very good. Low- to medium-severity joint seal damage and shrinkage cracks were the most prevalent distresses, Low-severity joint and corner spalls, linear cracks, and small patches were also present.
Taxiway 7	5,400 × 75 45,000	P	This PCC-surfaced feature rated in good condition. Medium-severity joint seal damage and shrinkage cracks existed throughout the feature, and some of the shrinkage cracks have deteriorated into low-severity linear cracks. Low- and medium-severity small patches were the other distresses present.

(Continued)

Table 2 (Continued)

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
Taxiway 7A	1,042 × 75 8,683	P	This feature is in good condition. Medium-severity joint seal damage and shrinkage cracks are evident throughout the PCC surface. Low-severity linear cracking and low- and medium-severity were observed as well as a few instances of low-severity joint and corner spalls and medium-severity linear cracking and small patches.
Taxiway 8	3,155 × varies 31,764	P	This taxiway rated in good condition. Medium-severity joint seal damage and shrinkage cracks are present throughout the PCC surface. All severity levels of linear cracking and small patches were observed as well as low-severity joint and corner spalls and large patches.
SAC Maintenance Apron Taxiway	varies × varies 14,722	P	This feature is in good condition. The joint sealant condition is medium severity, and shrinkage cracks are evident in a majority of the PCC slabs. The more prevalent distresses are low-severity linear cracks and low- and medium-severity small patches. Also observed were low- and medium-severity large patches and corner spalls and low-severity joint spalls.

(Continued)

Table 2 (Continued)

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
Nose Dock Taxiway and Entrances	2,450 × 75 20,417	S	This feature rated in fair condition. The joint seal damage is rated medium severity, and shrinkage cracking is evident in most of the PCC slabs. The prevalent distresses are all severities of linear cracking, small and large patches, and joint spalling. Noted in lesser degrees were low- and medium-severity corner breaks and corner spalls.
Original Apron Taxiway (T15A, T26C, T27C, T28C)	varies × varies 59,028	P and S	This PCC facility is in good to very good condition. Very fine shrinkage cracks and low-severity small and large patches and low-severity linear cracks were the most prevalent distresses. Also noted were low-severity corner breaks, joint and corner spalls, and shattered slabs.
Building Access Taxiways (T23C, T32C through T38C)	varies × varies 13,528	S	The PCC-surfaced features rated from poor to very good condition. Shrinkage cracks were observed in most of the slabs, and the joint sealant condition ranged from good to high severity. Small and large patches and joint and corner spalls were evident in all the features. Higher densities and worse severity levels were present in the lower rated features. Linear cracks and corner breaks of varying severities were also observed. The asphalt-surfaced feature rated good, with low- and medium-severity block cracking and low-severity longitudinal and transverse cracking evident.

(Continued)

Table 2 (Continued)

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
F-15 Maintenance Taxiways (T41C, T42C)	varies × 50 2,333	S	These PCC-surfaced features rated excellent. Joint seal damage rated low to medium severity, and low-severity joint spalls were also observed.
Runway Warm-Up Aprons	varies × varies 65,625	S	These features are in very good condition. The joint sealant condition ranged from good to high-severity, and shrinkage cracks were present in many of the PCC slabs. Low-severity linear cracks, small and large patches, and joint and corner spalls were observed in varying degrees.
SAC Maintenance Apron	2,175 × 750 184,306	S	This apron is in good condition. High-severity joint seal damage and shrinkage were evident throughout the PCC surface. Low-severity linear cracks and low- and medium-severity small patches were the more prevalent distresses.
North Apron	1,050 × varies 217,592	S	The PCC surface in this apron rated very good. Shrinkage cracks were evident throughout, and low- and medium-severity small and large patches were the more prevalent distresses.
Northwest Apron	varies × 500 98,889	S	This apron rated good in the condition survey. The joint sealant condition rated low severity, and fine shrinkage cracks were evident over a majority of the PCC surface. The more prevalent distresses included low- and medium-severity linear cracks and low-severity small and large patches.

(Continued)

Table 2 (Continued)

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
West Apron	1,450 × varies 107,833	S	This feature is in fair condition. Medium-severity joint seal damage and shrinkage cracks were evident throughout the PCC surface. All severities of linear cracking, small and large patching, and joint and corner spalling were observed.
SAC Alert Apron	varies × 100 21,333	S	This facility is in good condition. The joint sealant rated medium severity and shrinkage cracks were observed throughout the PCC surface. The more prevalent distresses were low- and medium-severity small patches and linear cracks.
Original Apron	varies × varies 132,542	S	The PCC surface in this feature rated good in the condition survey. Fine shrinkage cracks and low-severity small and large patches and linear cracks were the most prevalent distresses. Among the other distresses observed were low- and medium-severity joint and corner spalls.
South Extension Apron	975 × 225 24,375	S	The condition of this apron rated good. The joint sealant rated medium severity, and fine shrinkage cracks were noted in most of the PCC slabs. The more prevalent distresses were low-severity corner breaks, linear cracks, small and large patches, and joint and corner spalls.

(Continued)

Table 2 (Continued)

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
Building 149 Aprons (A12B, A13B)	varies × varies 19,574	S	This facility rated very good to excellent in the condition survey. Fine shrinkage cracks, low-severity small and large patches, linear cracks, and joint spalls were noted in the PCC surface.
Old East-West Runway used as apron	1,125 × 150 18,750	S	This apron is in good condition. Shrinkage cracks were noted in most of the PCC slabs, and low- and medium-severity linear cracks, small and large patches, and joint spalls were among the other distresses observed.
Temporary Paver Check Pad			This apron rated in very good condition. The joint sealant was rated low severity. Fine shrinkage cracks and low-severity corner breaks, joint spalls, and small and large patches were also observed.
Old Dangerous Cargo Pad (A16B, A17B)	475 × varies 7,122	S	The AC feature in this facility rated very good. Low-severity block and longitudinal and transverse cracking and patching were the more prevalent distresses observed. The PCC feature rated fair. The joint sealant rated low severity and shrinkage cracks were noted in most of the slabs. All severities of joint spall, low-severity linear cracks and small patches and low- and medium-severity large patches were the more prevalent distresses.

(Continued)

Table 2 (Concluded)

Facility Name	Dimensional Area Length × Width, ft Area, sq yd	P or S*	General Comments
Air Freight Extension Apron	275 × varies 17,188	S	This apron rated in good condition. The joint sealant rated medium severity and shrinkage cracks were evident in a majority of the PCC slabs. Low-severity joint and corner spalls, small and large patches, and linear cracks were also observed.
F-15 Maintenance Aprons (A19B, A20B)	varies × varies 11,544	S	These PCC features are in excellent condition. Medium- to high-severity joint seal damage was evident as were small amounts of low-severity linear cracking and joint and corner spalling.
Dangerous Cargo Apron	1,280 × varies 15,178	S	This facility rated in excellent condition. Shrinkage cracks and low-severity linear cracks, small patches, and joint and corner spalls were observed in the PCC surface.

Table 3

Comparison of 1979 and 1988 PCI

Facility	Feature	1979 PCI	1988 PCI	1988 Condition Rating
Runway 14-32	R1A	75	63	Good
	R2A	78	61	Good
	R3A	72	46	Fair
	R4A	77	53	Fair
	R5A	88	70	Good
	R6C	84	79	Very good
	R7A	77	71	Very good
	R8A	77	74	Very good
	R9C	75	67	Good
	R10C	79	67	Good
	R11D	91	71	Very good
	R12X	--	63	Very good
	R13X	--	64	Very good
Taxiway 1A	T1A	65	32	Poor
Taxiway 1	T2A1	70	74	Very good
Taxiway 3	T2A2	99	77	Very good
	T3A	99	77	Very good
	T4A	99	64	Good
Taxiway 4	T5A	99	76	Very good
Taxiway 4A	T6A	79	77	Very good
Taxiway 7A	T7A	72	64	Good
Taxiway 7	T8A	77	64	Good
Taxiway 6	T9A	77	63	Good
Taxiway 5	T10A	77	72	Very good
Taxiway 5A	T11A	74	65	Good
SAC Maintenance Taxiway	T12A	76	66	Good
Taxiway 8	T13A	80	64	Good
Taxiway 1B	T14A	78	59	Good
Original Apron Taxiway	T15A	73	75	Very good
Intersection Taxiway 2A with Runway	T16B	89	82	Very good
Taxiway 2A	T17B	79	98	Excellent
Taxiway 2	T18B	79	99	Excellent
Taxiway 3A	T19B	77	72	Very good
Intersection Taxiway 3A with Runway	T20B	90	85	Very good
Taxiway 6A	T21B	78	78	Very good
Intersection Taxiway 6A with Runway	T22B	83	80	Very good
Nose Dock Taxiway and Entrances	T23B	63	48	Fair
Taxiway 1C	T24B	69	55	Fair
Building 149 Access Taxiway	T25C	79	80	Very good
Original Apron Taxiway East B/110/125	T26C	63	73	Very good
Original Apron Taxiway North B/110	T27C	71	72	Very good
Original Apron Taxiway West B/125	T28C	57	68	Good
Taxiway 3B	T29C	99	89	Excellent
Intersection Taxiway 3B and North Apron	T30C	86	100	Excellent

(Continued)

Table 3 (Concluded)

Facility	Feature	1979 PCI	1988 PCI	1988 Condition Rating
Taxiway to B/45	T32C	81	64	Good
Taxiway to B/44	T33C	74	57	Good
Taxiway to B/55	T34C	69	41	Fair
Taxiway to B/48 and B/49	T35C	80	60	Good
Taxiway to B/47	T36C	85	58	Good
Taxiway to B/54	T37C	57	37	Poor
Taxiway to B/89	T38C	78	41	Fair
Taxiway 3D	T39C	--	66	Good
Taxiway 3C	T40C	--	66	Good
F-15 Maintenance Taxiway	T41C	--	98	Excellent
	T42C	--	92	Excellent
South Warm-up Apron (SAC)	A1B	78	74	Very good
South Warm-up Apron-West Side of Runway	A2B	79	78	Very good
SAC Maintenance Apron	A3B	77	64	Good
North Apron	A4B	74	82	Very good
Northwest Apron	A5B	72	68	Good
West Apron	A6B	65	50	Fair
North Warm-up Apron (SAC)	A7B	80	76	Very good
North Warm-up Apron-West Side of Runway	A8B	81	83	Very good
Alert Apron	A9B	78	69	Good
Original Apron	A10B	66	63	Good
South Extension Apron	A11B	66	58	Good
B/149 Operational Apron	A12B	79	86	Excellent
B/149 Access Apron	A13B	58	80	Very good
Old E-W Runway used as Apron	A14B	57	64	Good
Temporary Power Check Pad	A15B	96	82	Very good
Old Dangerous Cargo Pad	A16B	49	43	Fair
Old Dangerous Cargo Pad	A17B	97	74	Very good
Air Freight Extension Apron	A18B	90	70	Good
F-15 Maintenance Apron	A19B	--	88	Excellent
	A20B	--	85	Very good
Dangerous Cargo Pad	A21B	--	93	Excellent

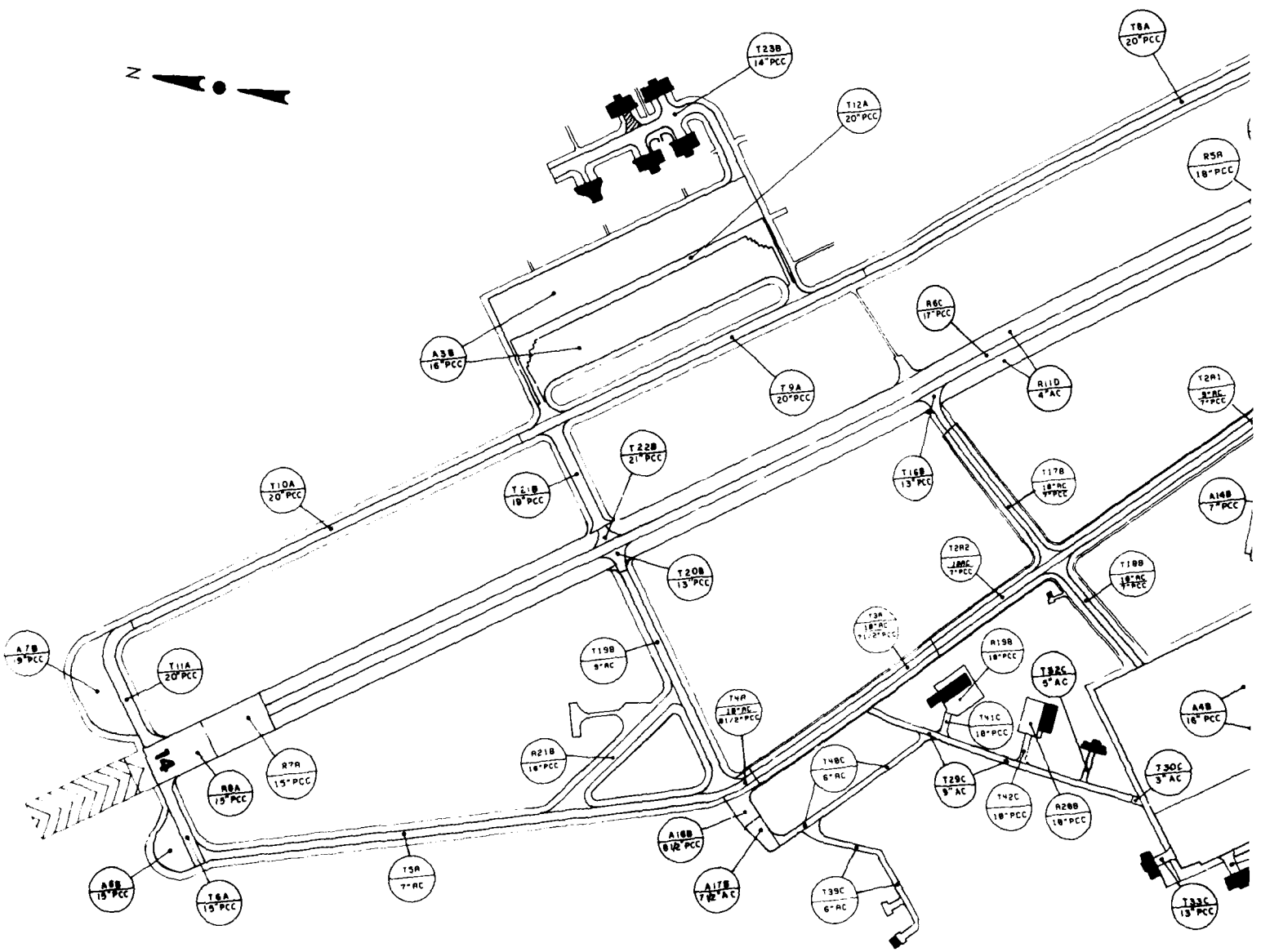
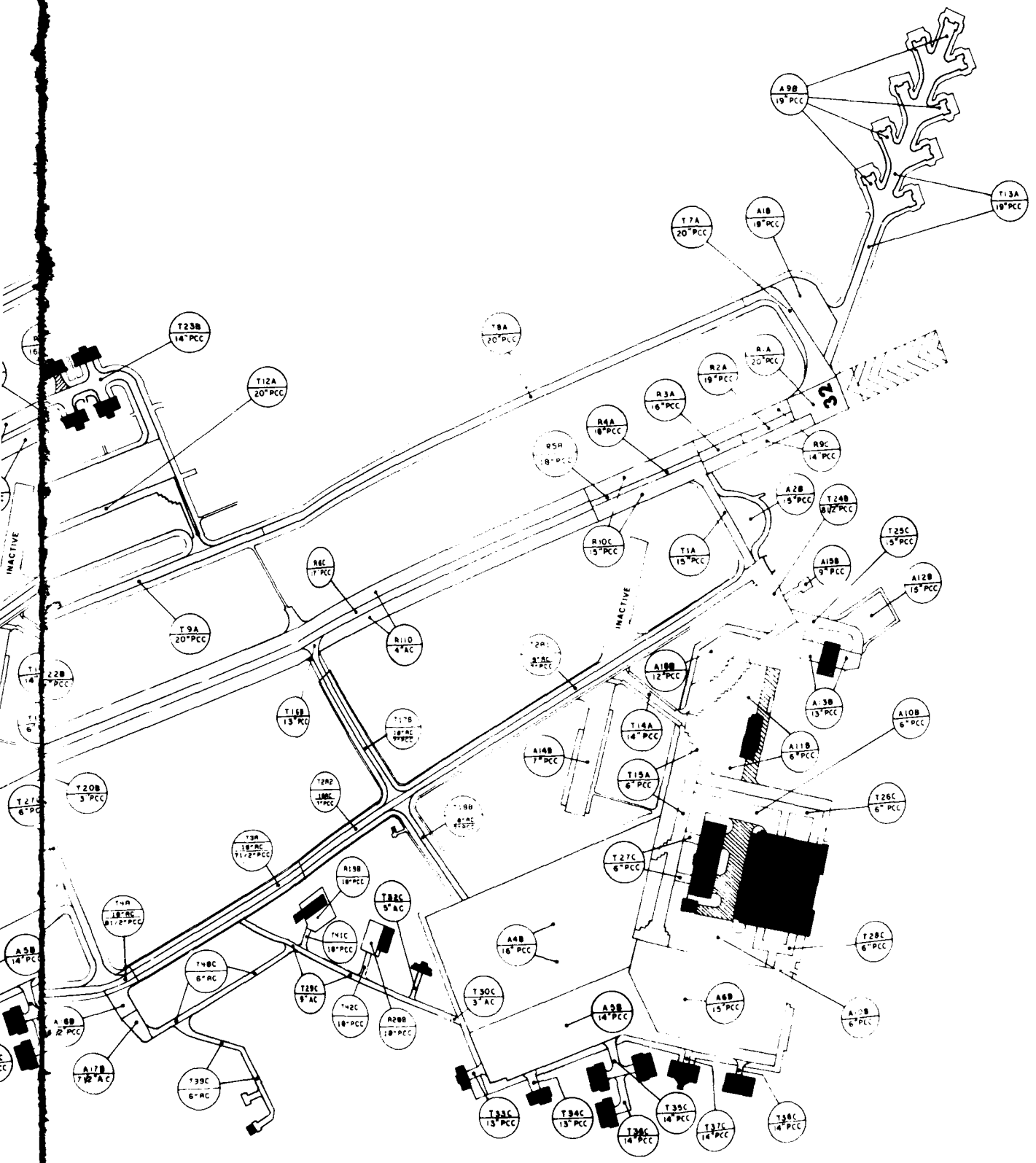


Figure 1. Airfield pavement feature identifications of Robins AFB



pavement feature identifications of Robins AFB

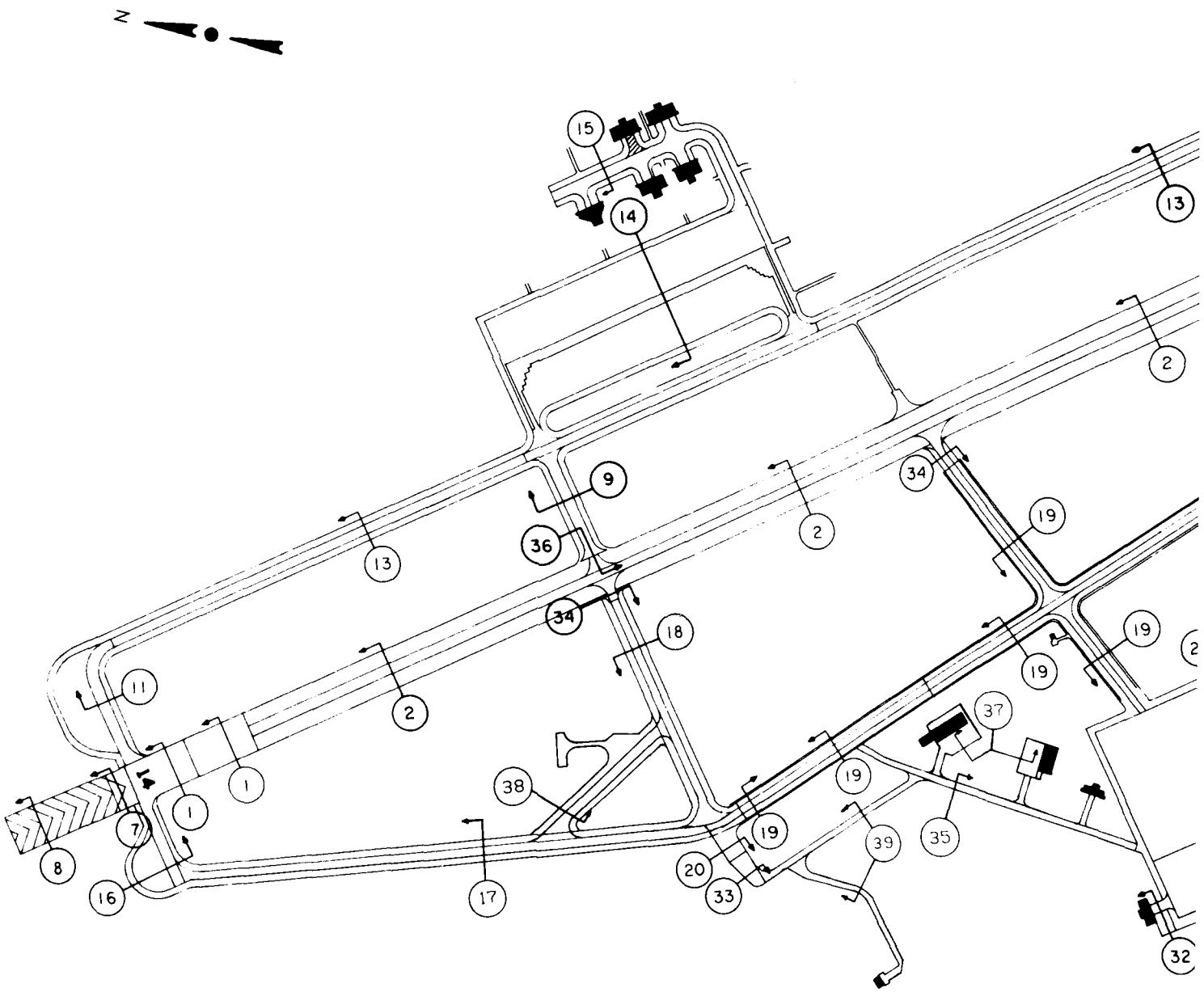
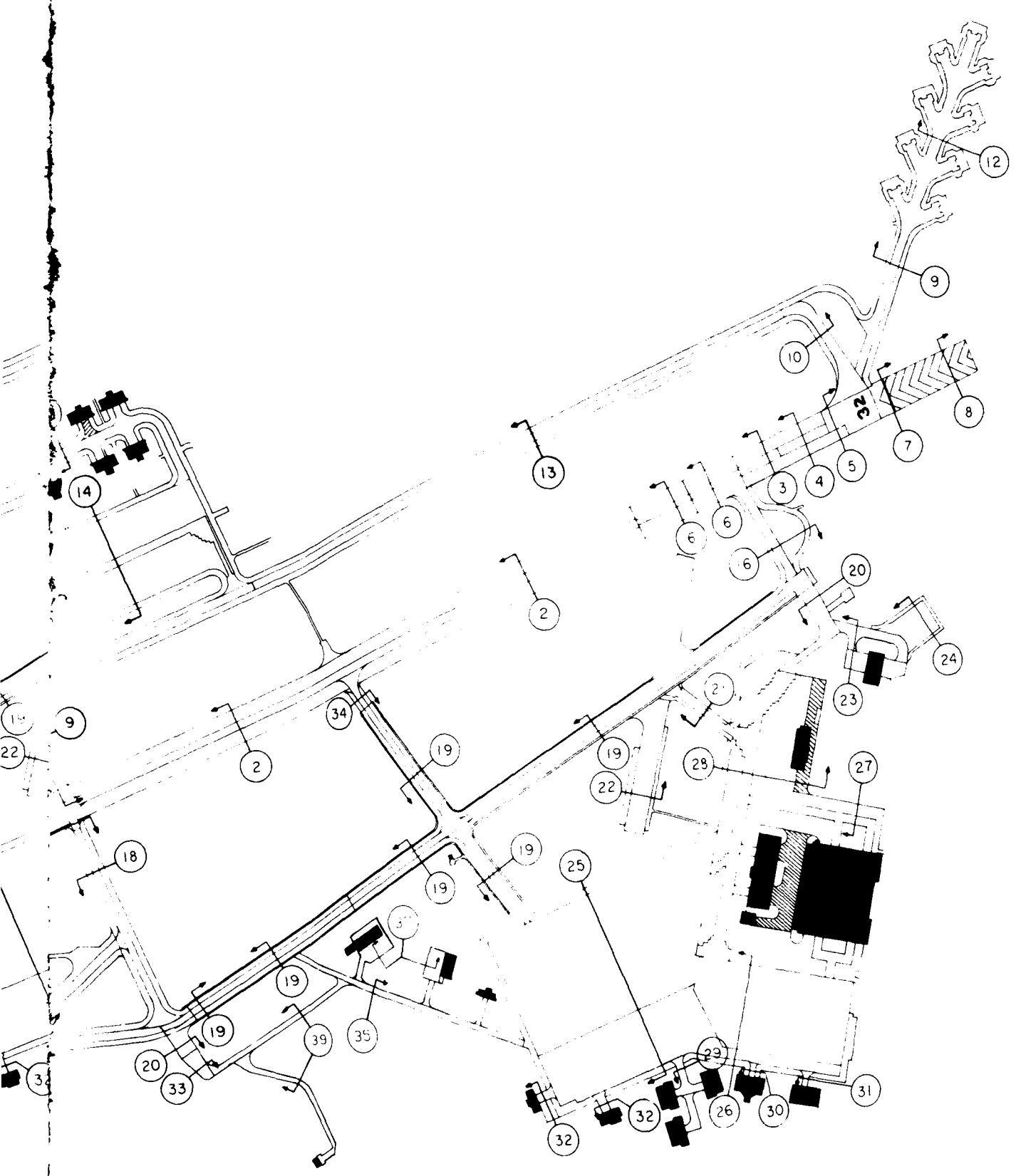
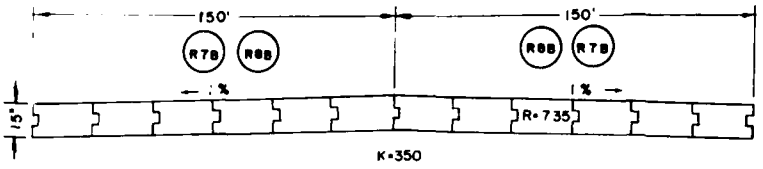


Figure 2. Location of typical cross sections



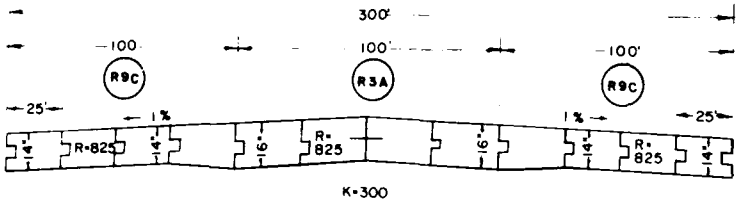
2. Location of typical cross sections



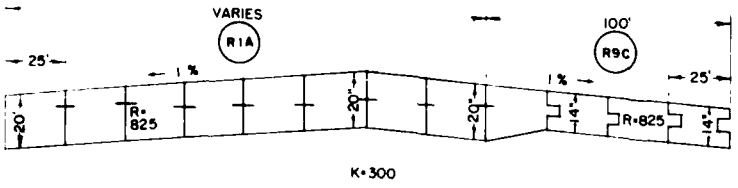
SECTION 1

1" REMOVED & REPLAC
3/4" REMOVED & REPLAC
3/4" SCARIFIED

1 1/2" BITUMINOUS
2 1/2" MINIMUM(VARI
6" WATER-BOUND
7" COMPACTED STA
USI
1" REMOVED &

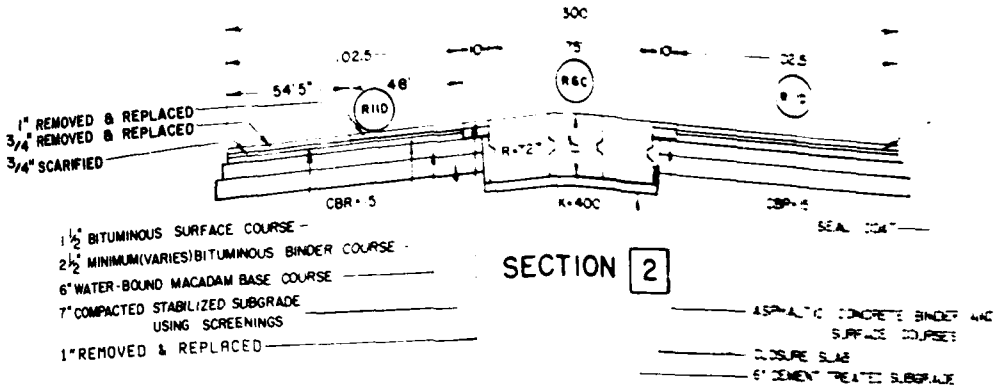


SECTION 3



SECTION 5

Figure 3. Typical cross sections 1 throu



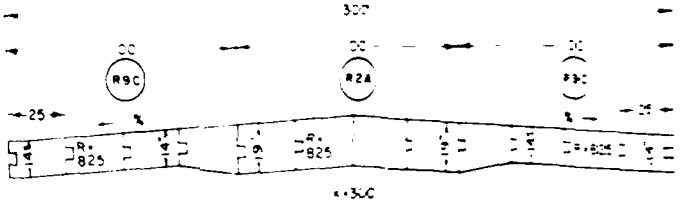
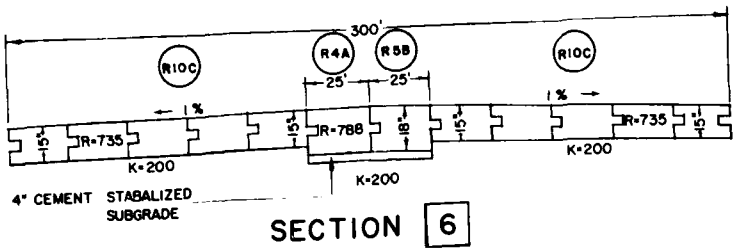
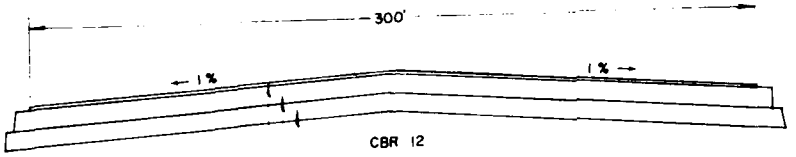


Figure 3. Typical cross sections 1 through 5

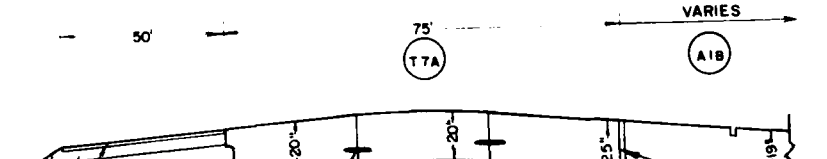


SECTION 6



1" SURFACE COURSE
9" CRUSHED AGGREGATE BASE COURSE CBR 80
8" CRUSHED PCC SUB-BASE CBR 50

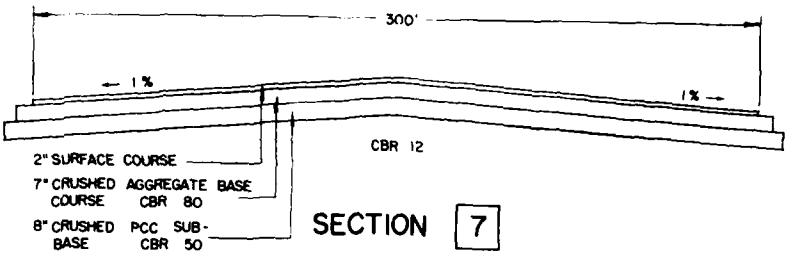
SECTION 8



LONGITUDINAL CONSTRUCTION JOINT WITH DOWELS
2" SURFACE COURSE
6" CRUSHED AGGREGATE BASE COURSE
LONGITUDINAL EXPANSION JOINT WITH THICKENED EDGE

SECTION 10

Figure 4. Typical cross sections 6



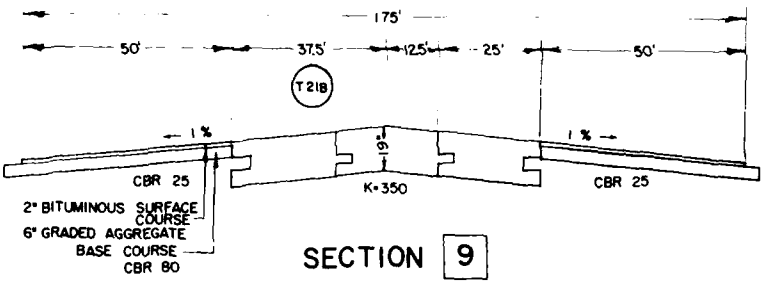
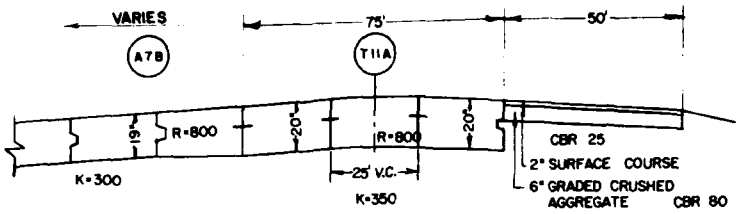
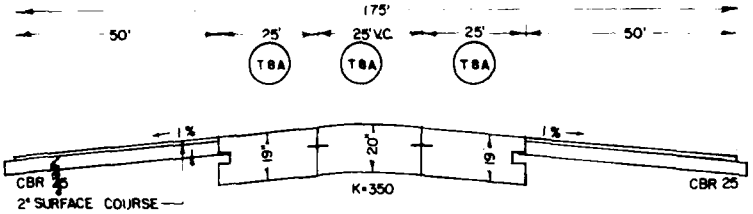


Figure 4. Typical cross sections 6 through 10

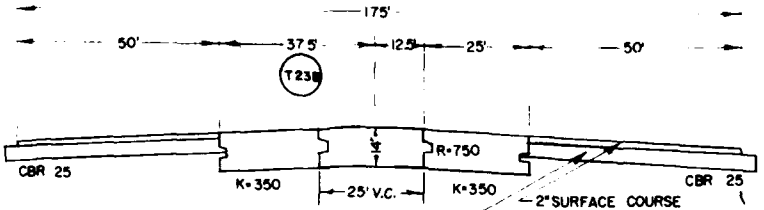


SECTION 11



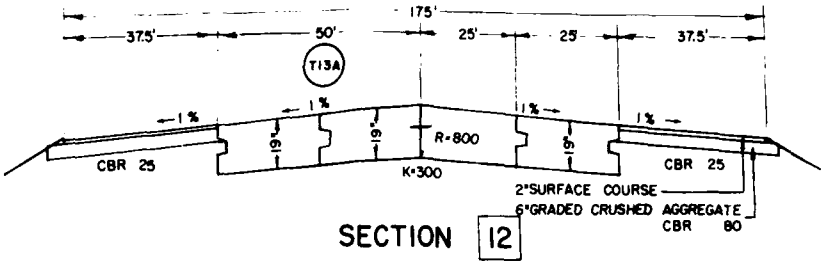
SECTION 13

SECTION ALSO APPLIES TO T9A AND T10A



SECTION 15

Figure 5. Typical cross sections 11 through



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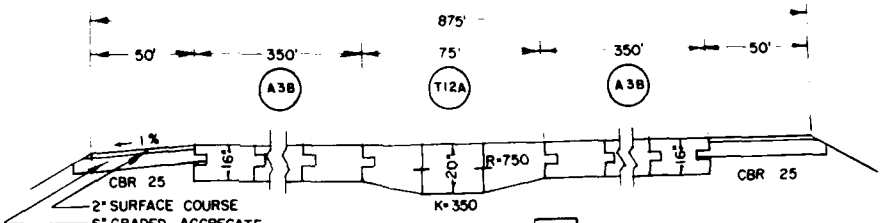
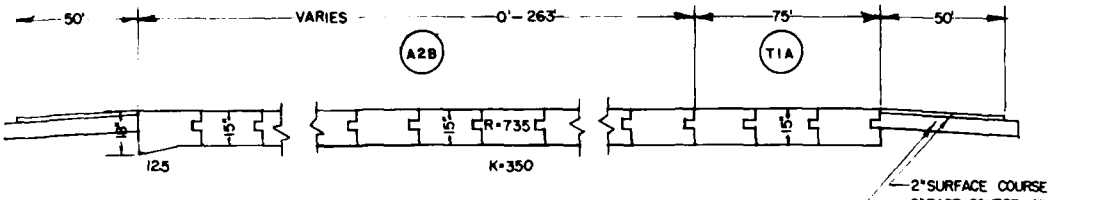


SECTION 14

e 5. Typical cross sections 11 through 15



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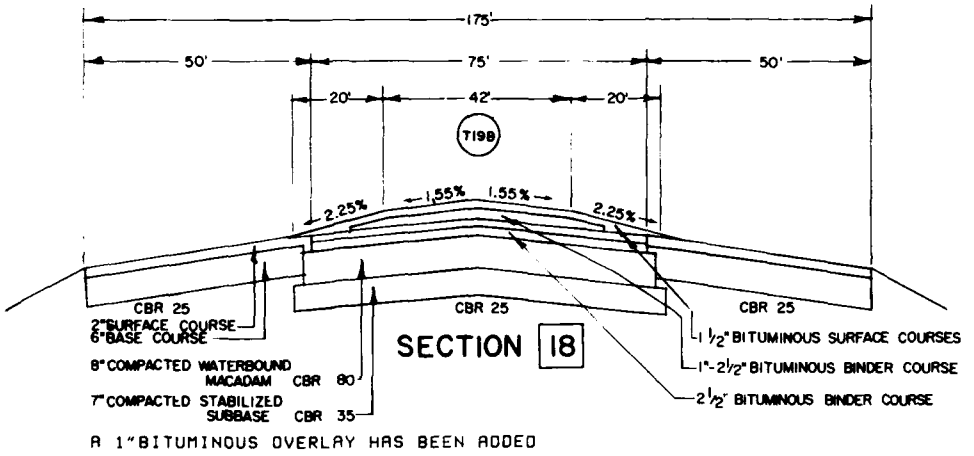
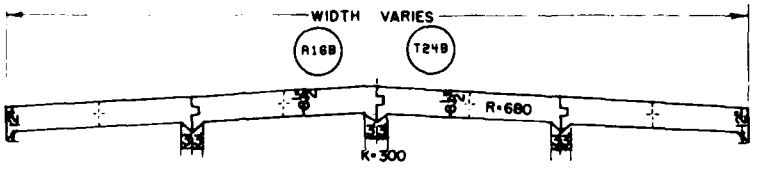


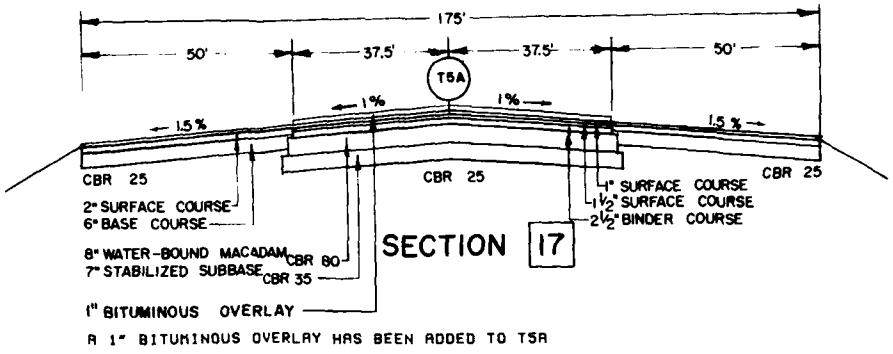
SECTION 18

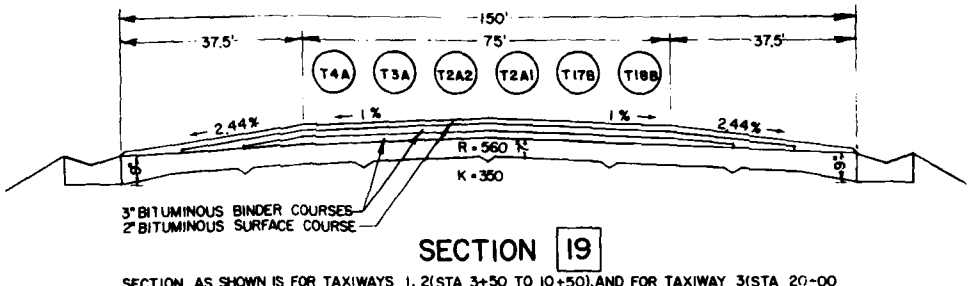
A 1"BITUMINOUS OVERLAY HAS BEEN ADDED



SECTION 20

Figure 6. Typical cross section



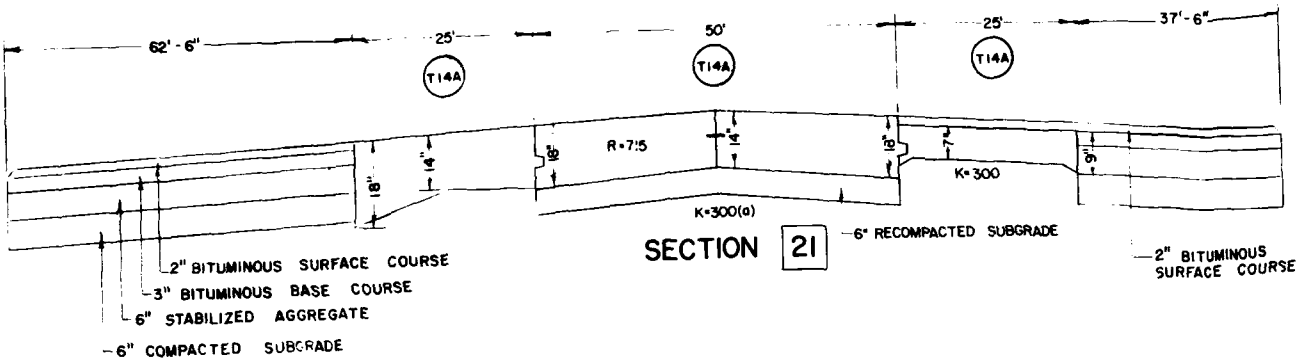


SECTION AS SHOWN IS FOR TAXIWAYS 1, 2(STA 3+50 TO 10+50),AND FOR TAXIWAY 3(STA 20+00 TO 32+40). THICKNESS OF PCC FOR TAXIWAY 3(0+00 TO 3+00) IS 12"-8½"-8½"-12" AND [illegible] 3+00 TO 20+00) IS 11"-7½"-7½"-11". A 1" BITUMINOUS OVERLAY HAS BEEN ADDED TO TAXIWAY 2 AND 4.

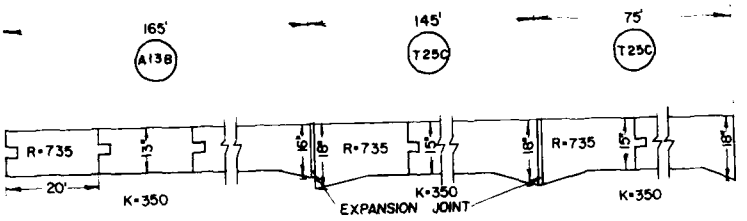
A 1" BITUMINOUS OVERLAY HAS BEEN ADDED TO TAXIWAYS 1 & 3

A 2" BITUMINOUS OVERLAY HAS BEEN ADDED TO TAXIWAYS 2 & 2A

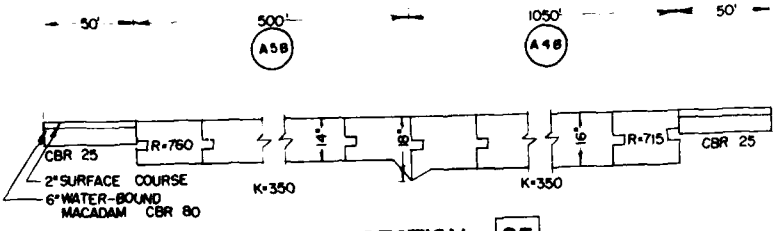
gure 6. Typical cross sections 16 through 20



SECTION 21



SECTION 23



SECTION 25

Figure 7. Typical cross sectio

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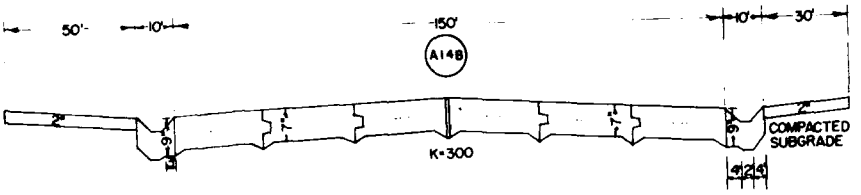
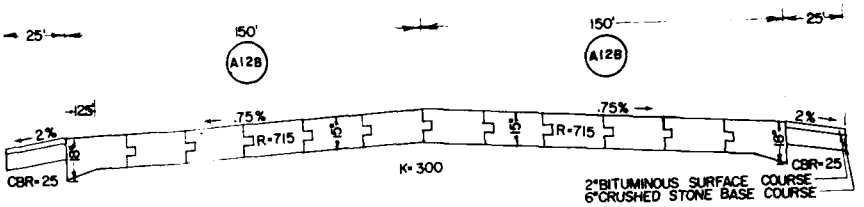
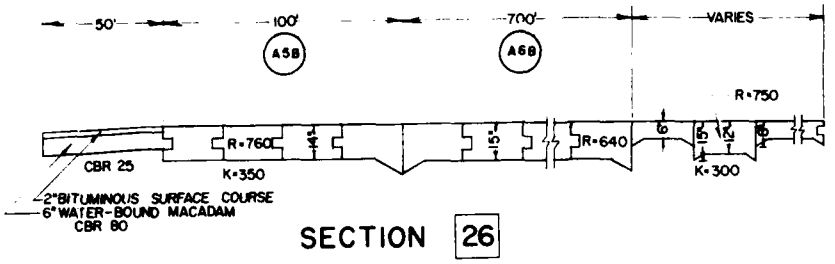


SECTION 22

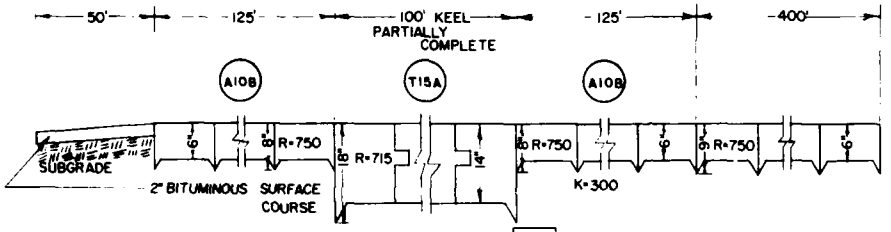


SECTION 24

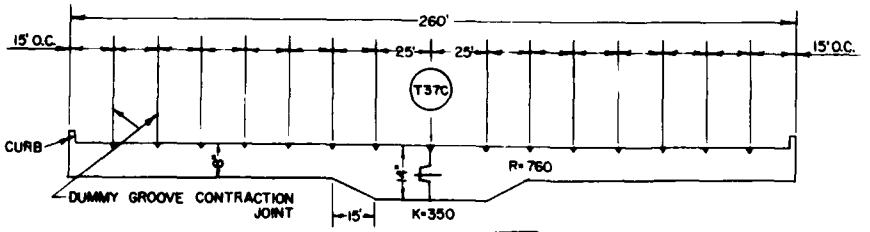
21 Typical cross sections 21 through 25



SECTION 26

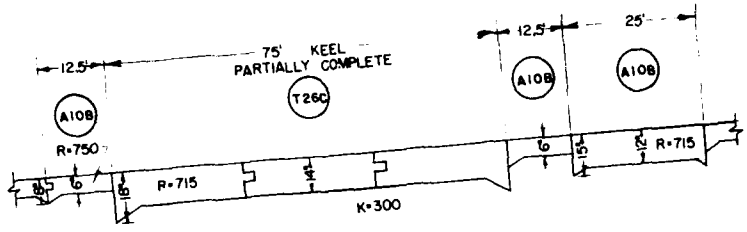


SECTION 28

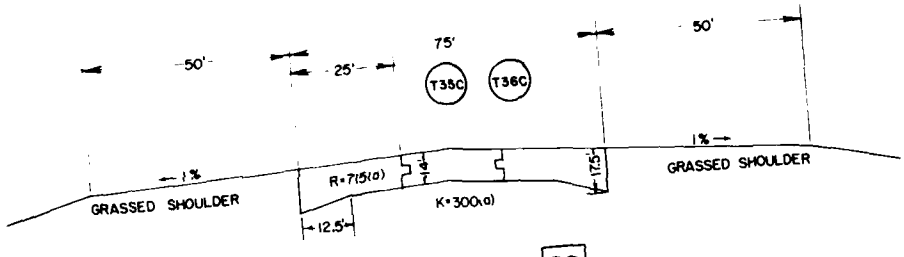


SECTION 30

Figure 8. Typical cross sections 26 thr



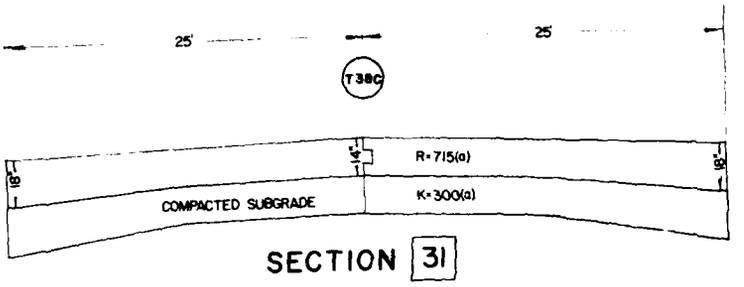
SECTION 27



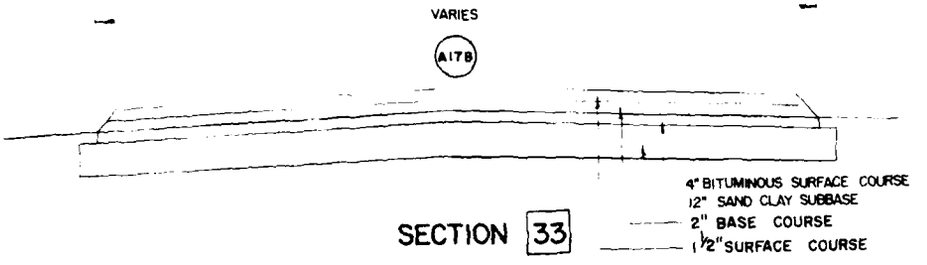
SECTION 29

h 30

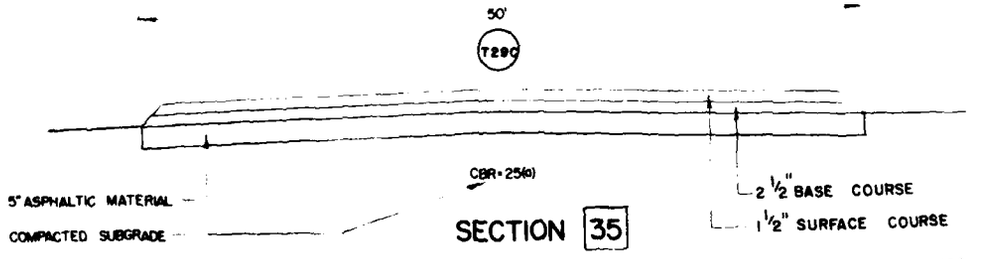
ure 8. Typical cross sections 26 through 30



SECTION 31

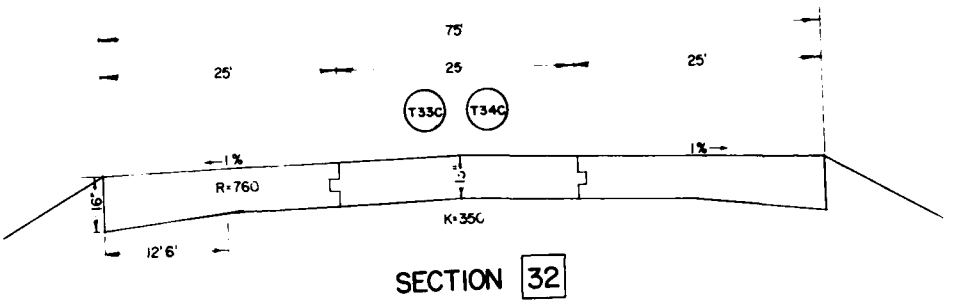


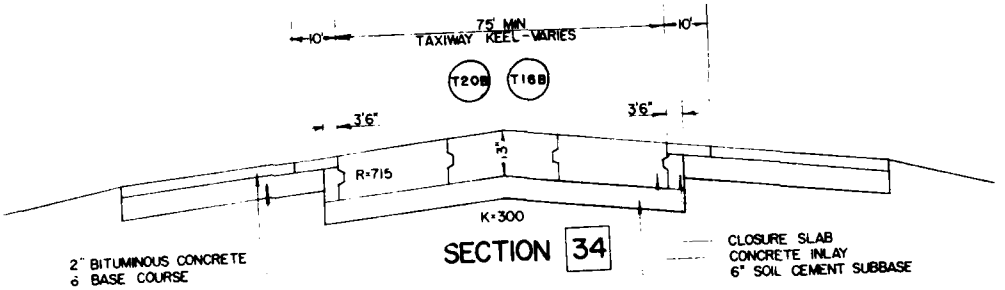
SECTION 33



SECTION 35

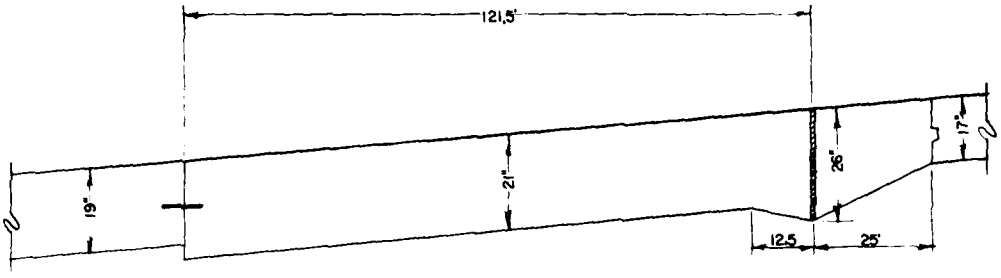
Figure 9. Typical cross sections 31



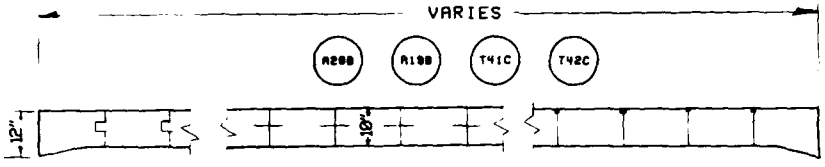


throug

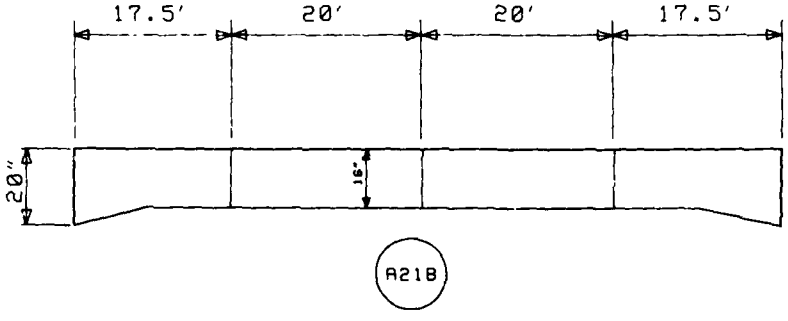
ure 9. Typical cross sections 31 through 35



SECTION 36

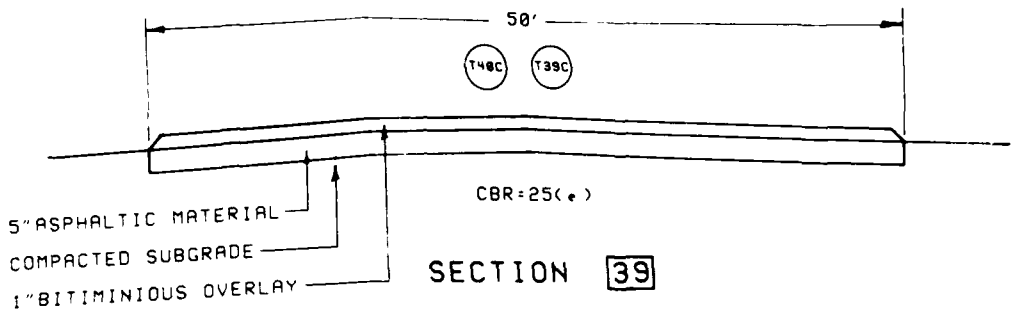


SECTION 37



SECTION 38

Figure 10. Typical cross sect



10. Typical cross sections 36 through 39

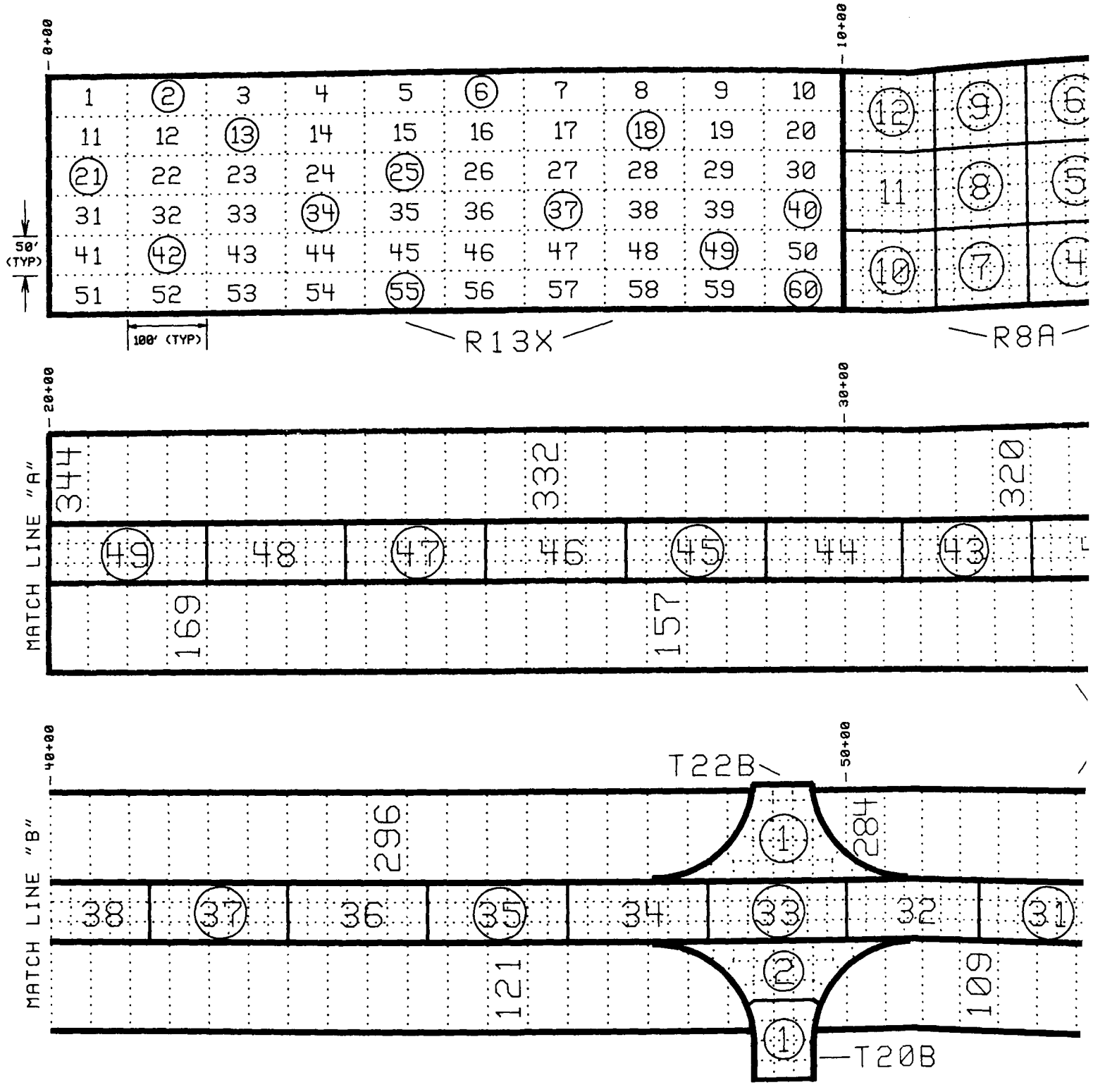
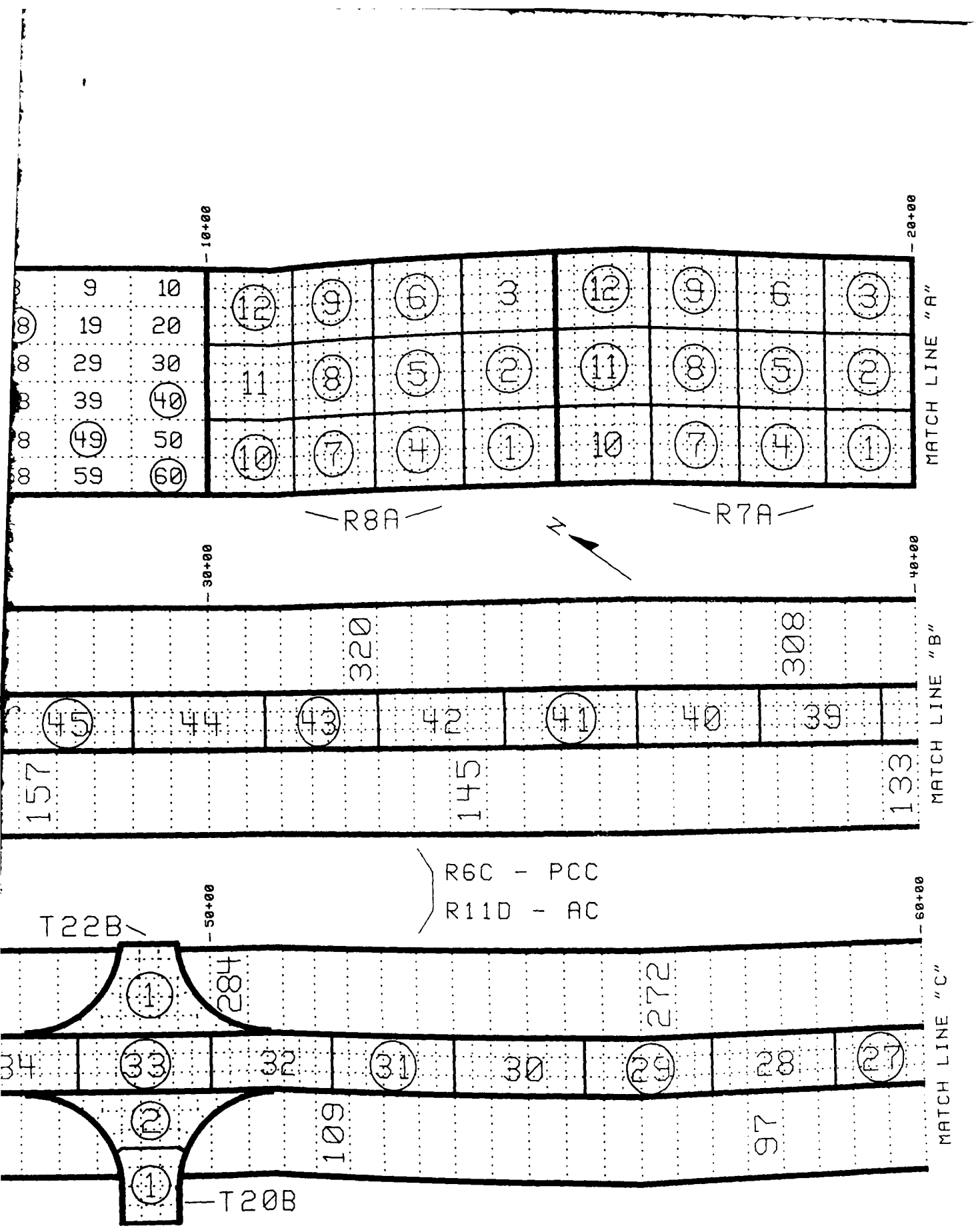


Figure 11. Sample unit layout, Runway 14-32 (features R6C, R7A, R8A, R11D, and R13
Taxiway 6A (feature T22B)



ay 14-32 (features R6C, R7A, R8A, R11D, and R13X), Taxiway 3A (feature T20B), and Taxiway 6A (feature T22B)

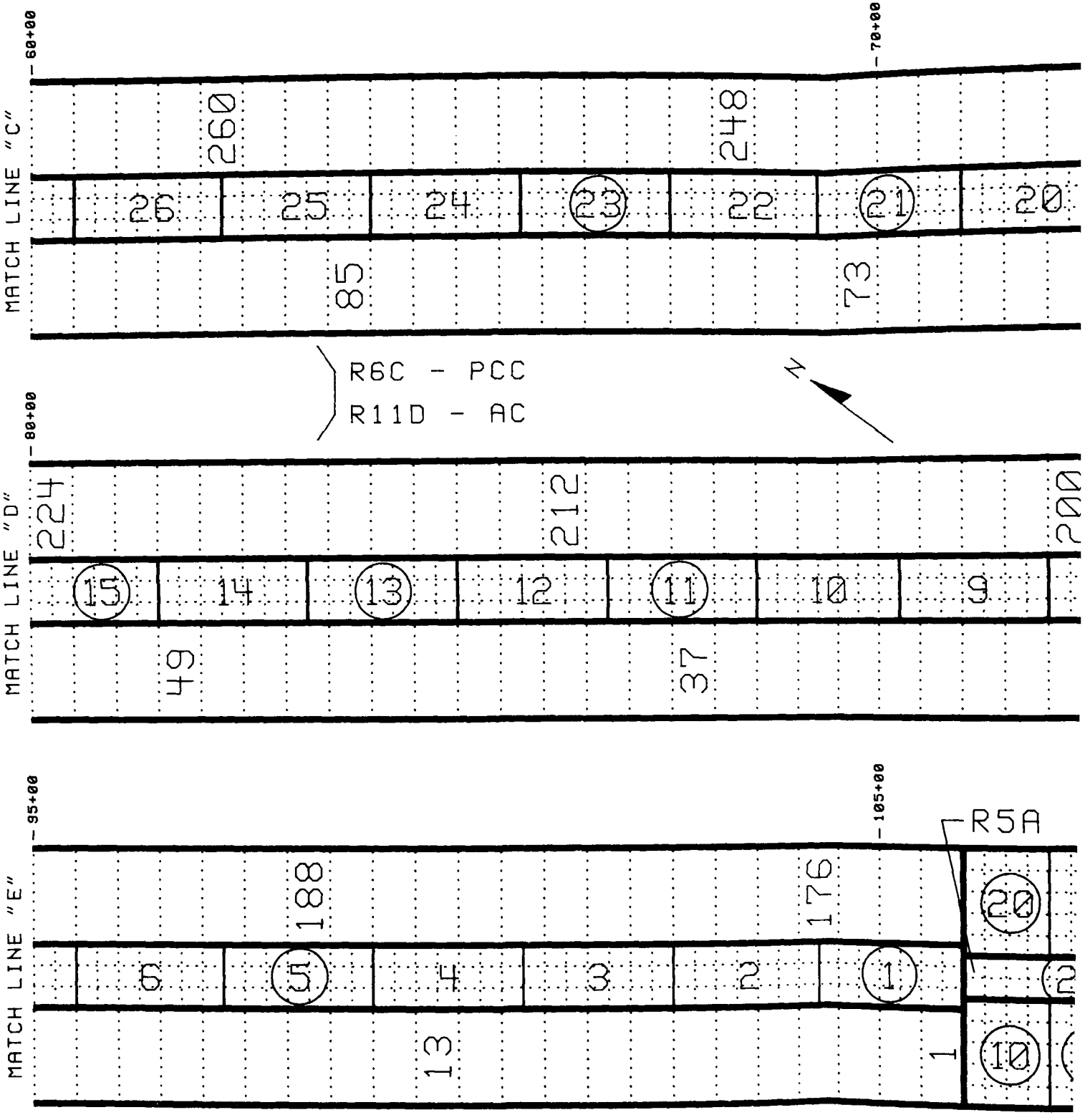
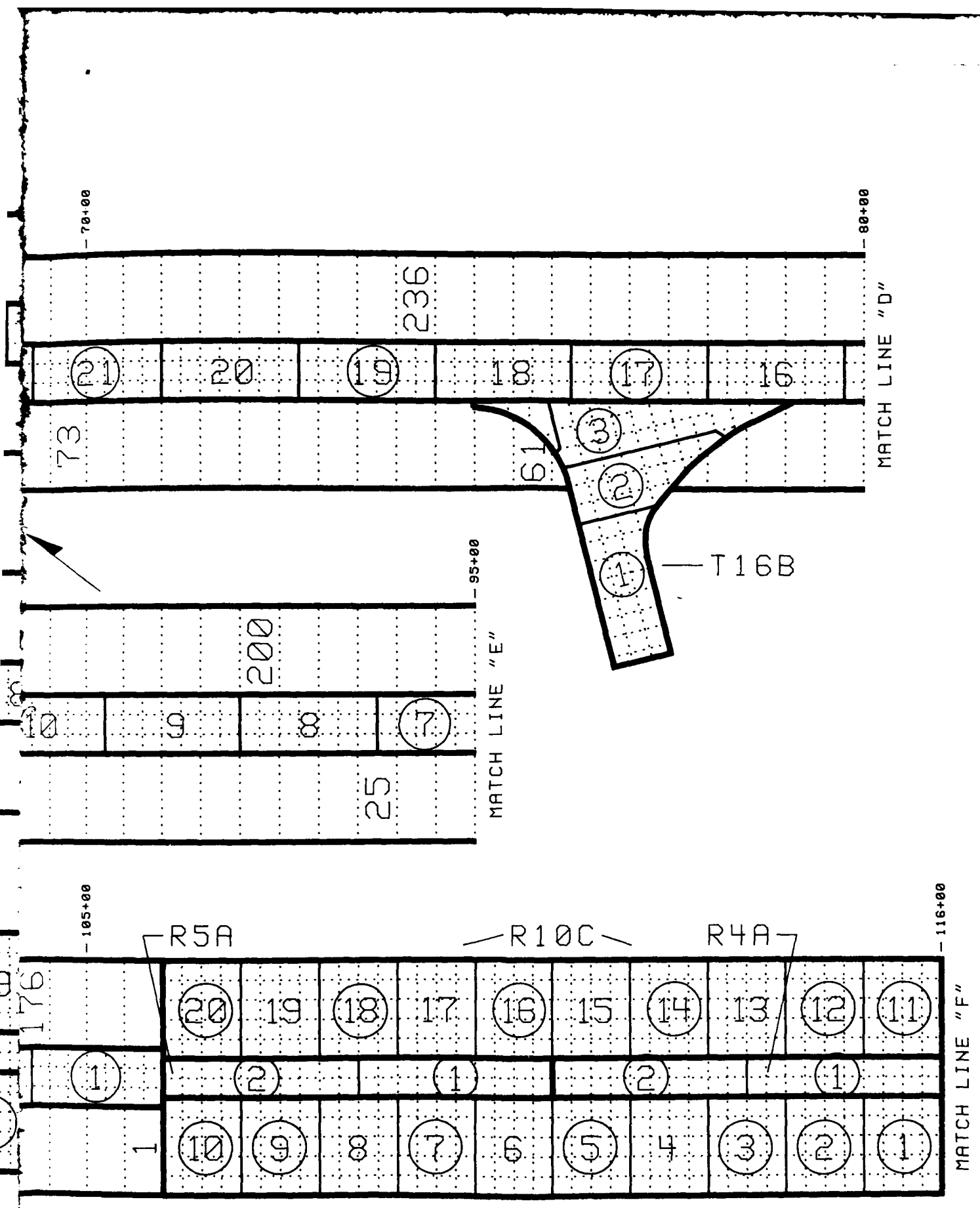


Figure 12. Sample unit layout, Runway 14-32 (features R4A, R5A, R6C, I



(features R4A, R5A, R6C, R10C, and R11D) and Taxiway 2A (feature T16B)

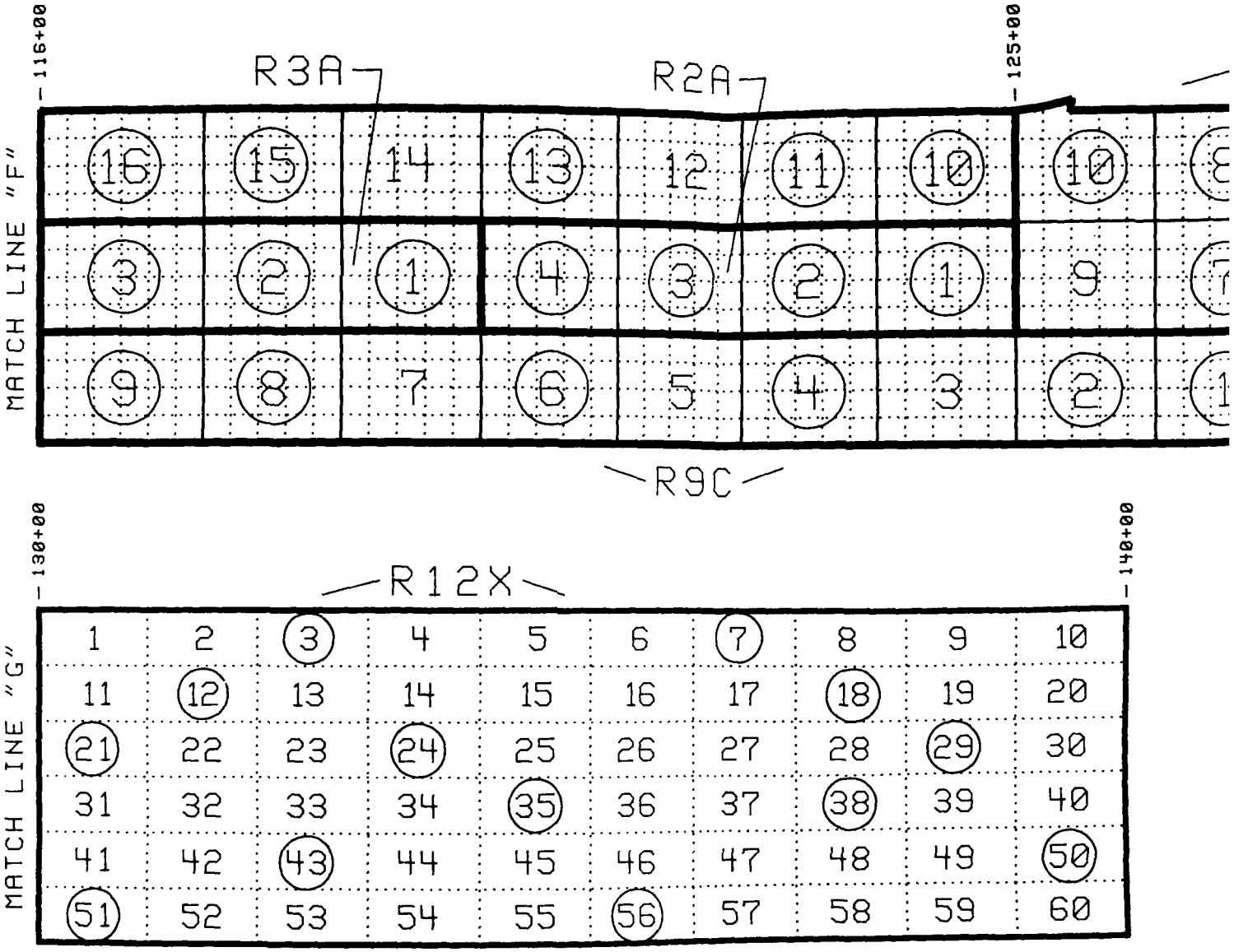
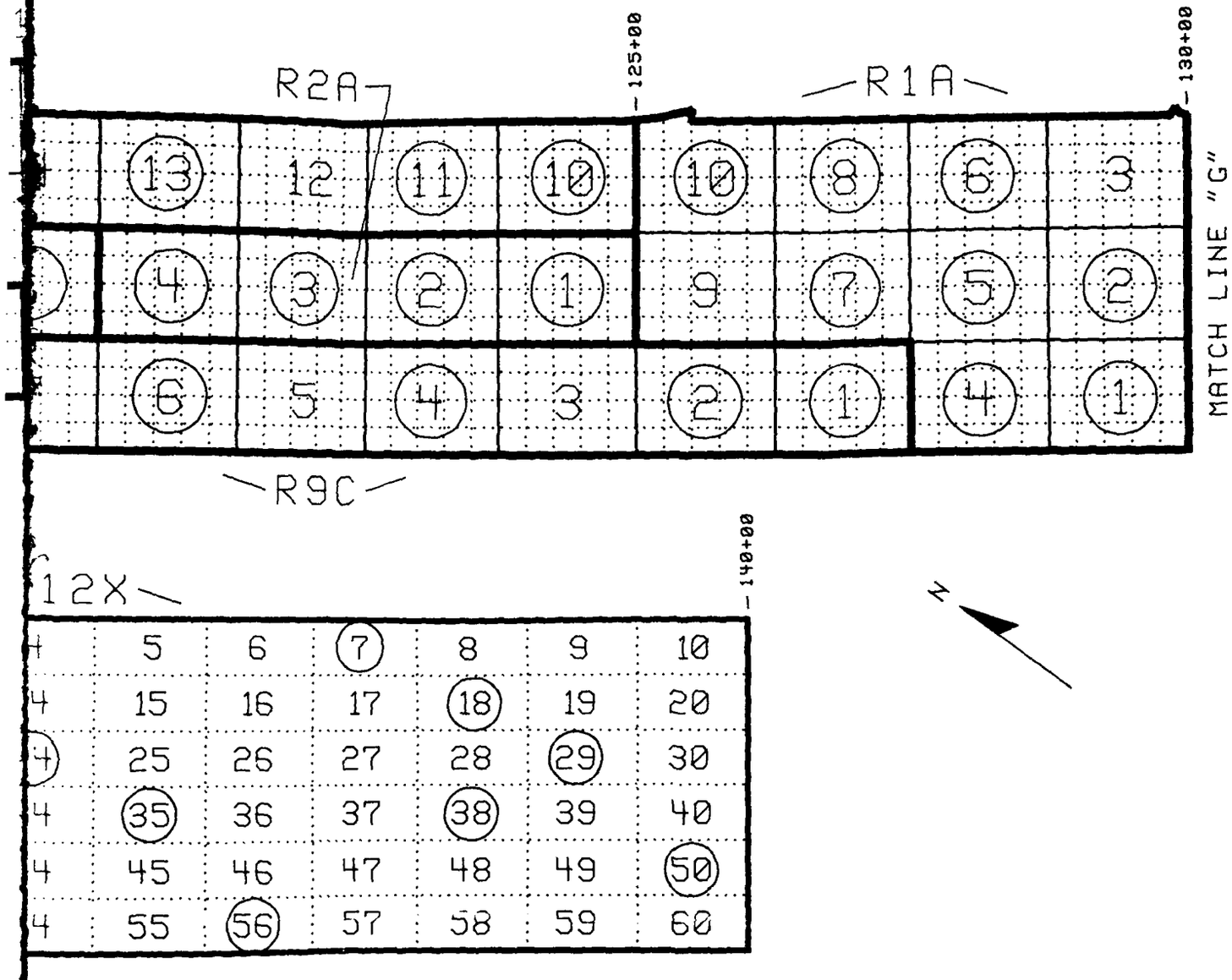


Figure 13. Sample unit layout, Runway 14-32 (features R1A, R2A, R3A, R9C,



Sample unit layout, Runway 14-32 (features R1A, R2A, R3A, R9C, and R12X)

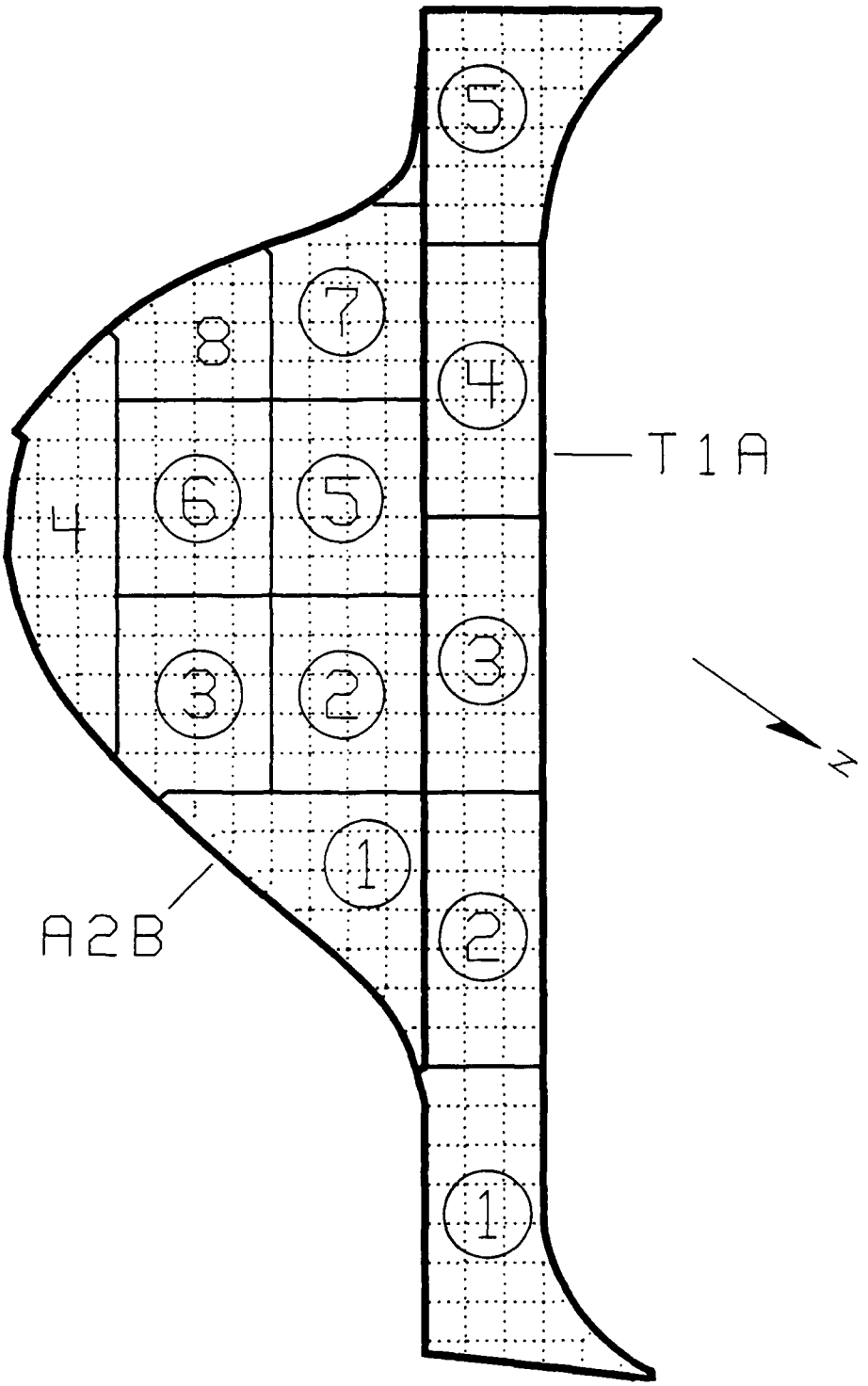


Figure 14. Sample unit layout, Taxiway 1A (feature T1A) and south warm-up apron - west side of runway (feature A2B)

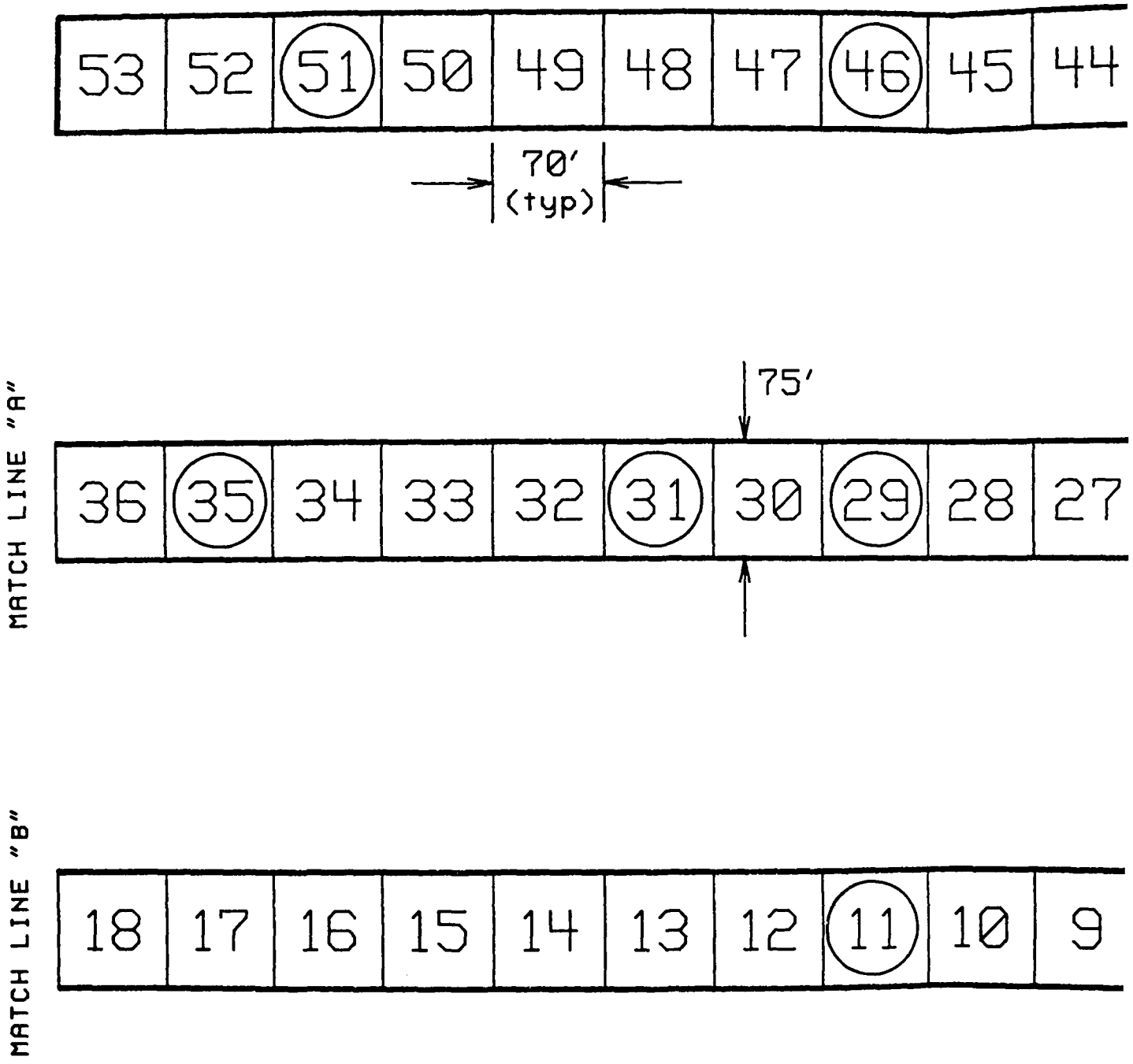


Figure 15. Sample unit layout, Taxiw

nit layout, Taxiway 1 (feature T2A1)

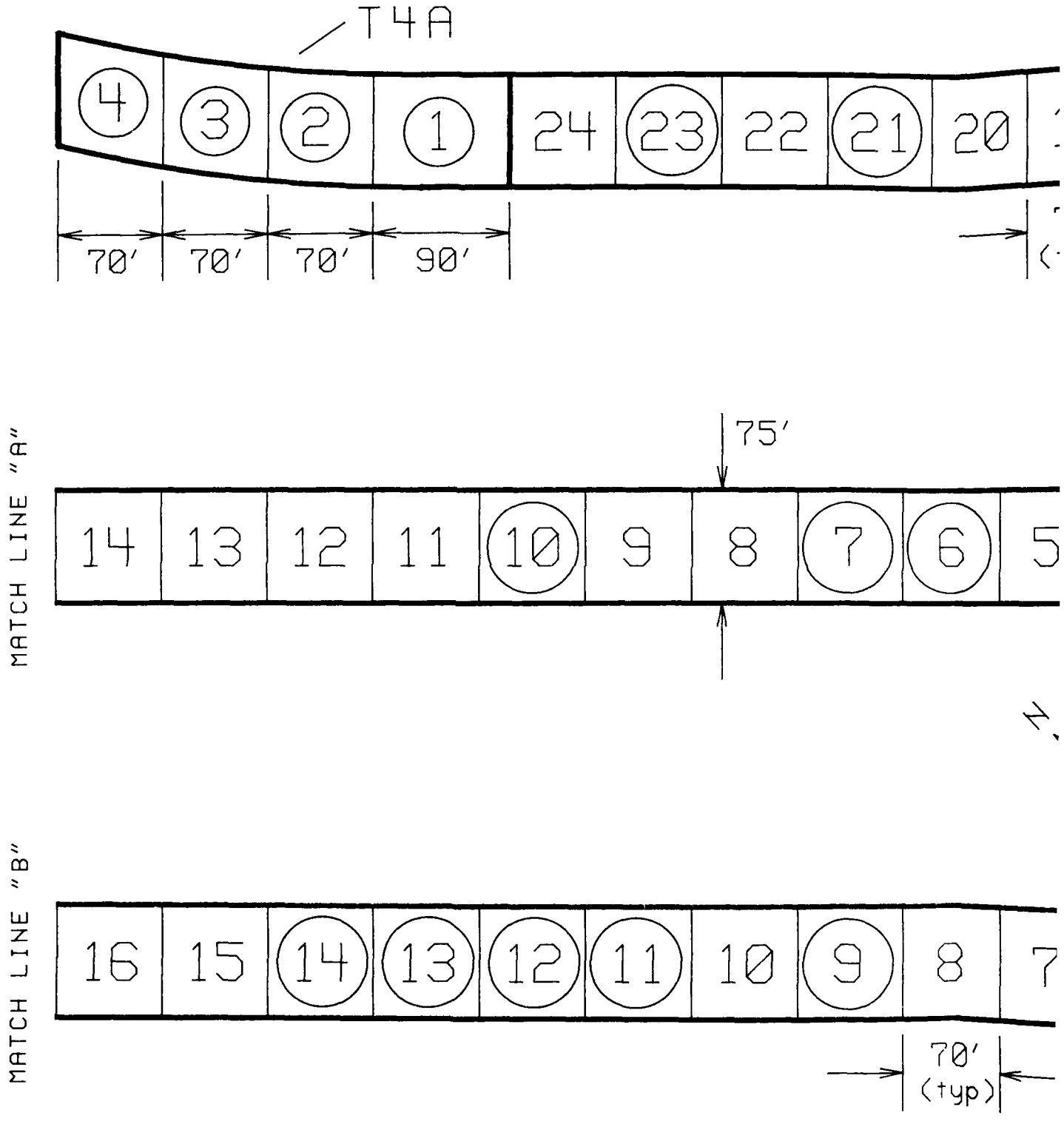
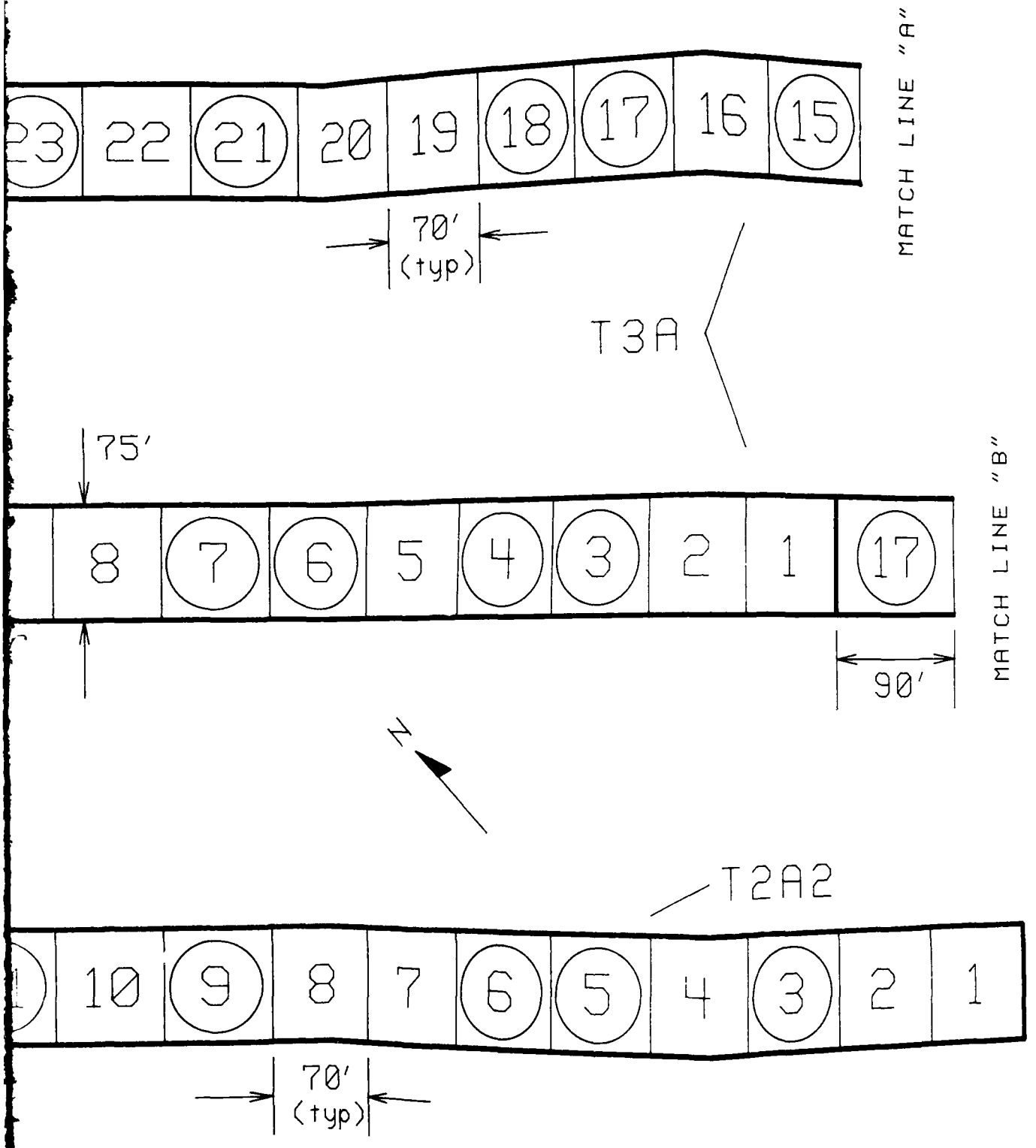


Figure 16. Sample unit layout, Taxiway 3 (feature



Sample unit layout, Taxiway 3 (features T2A2, T3A, and T4A)

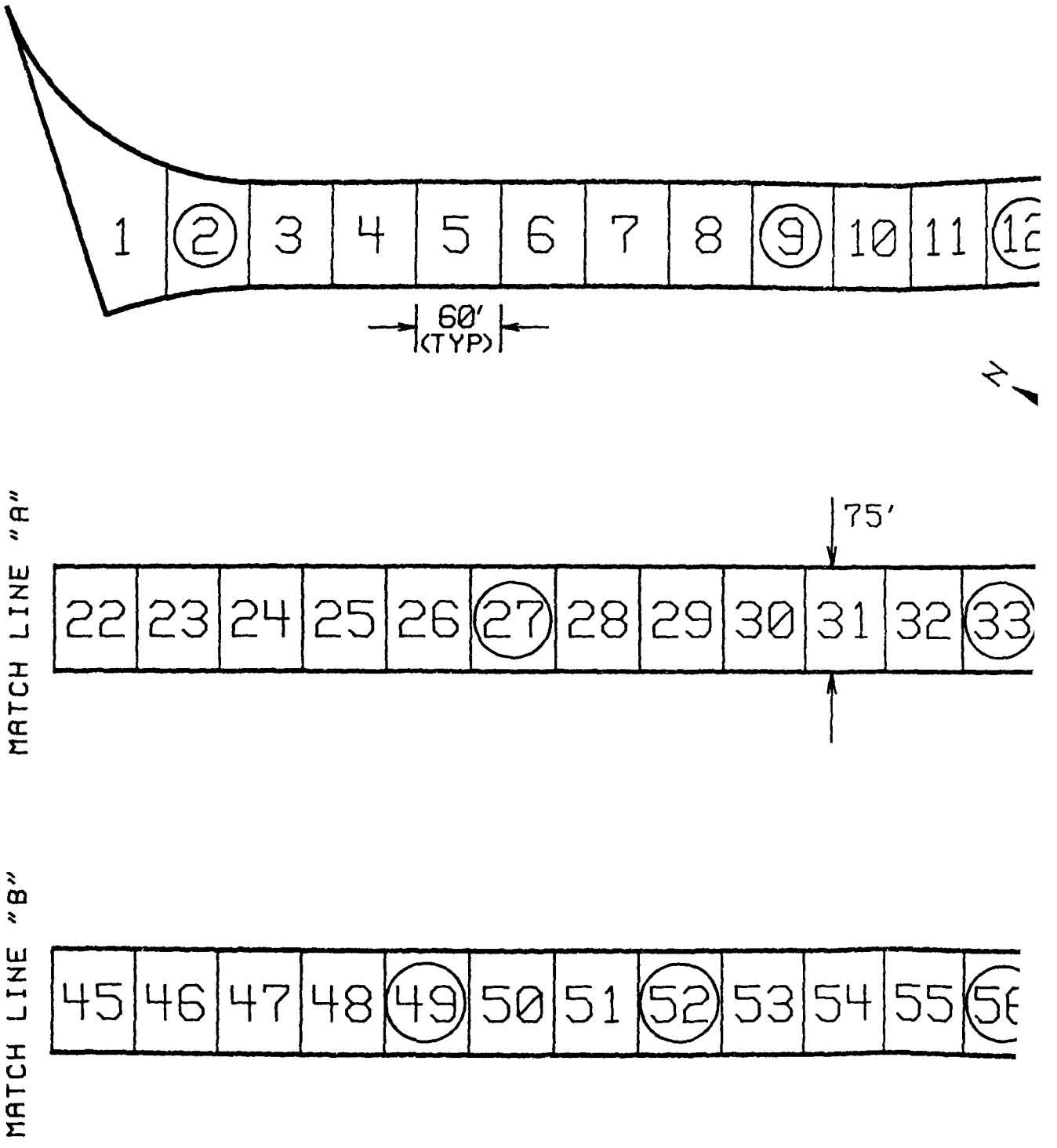
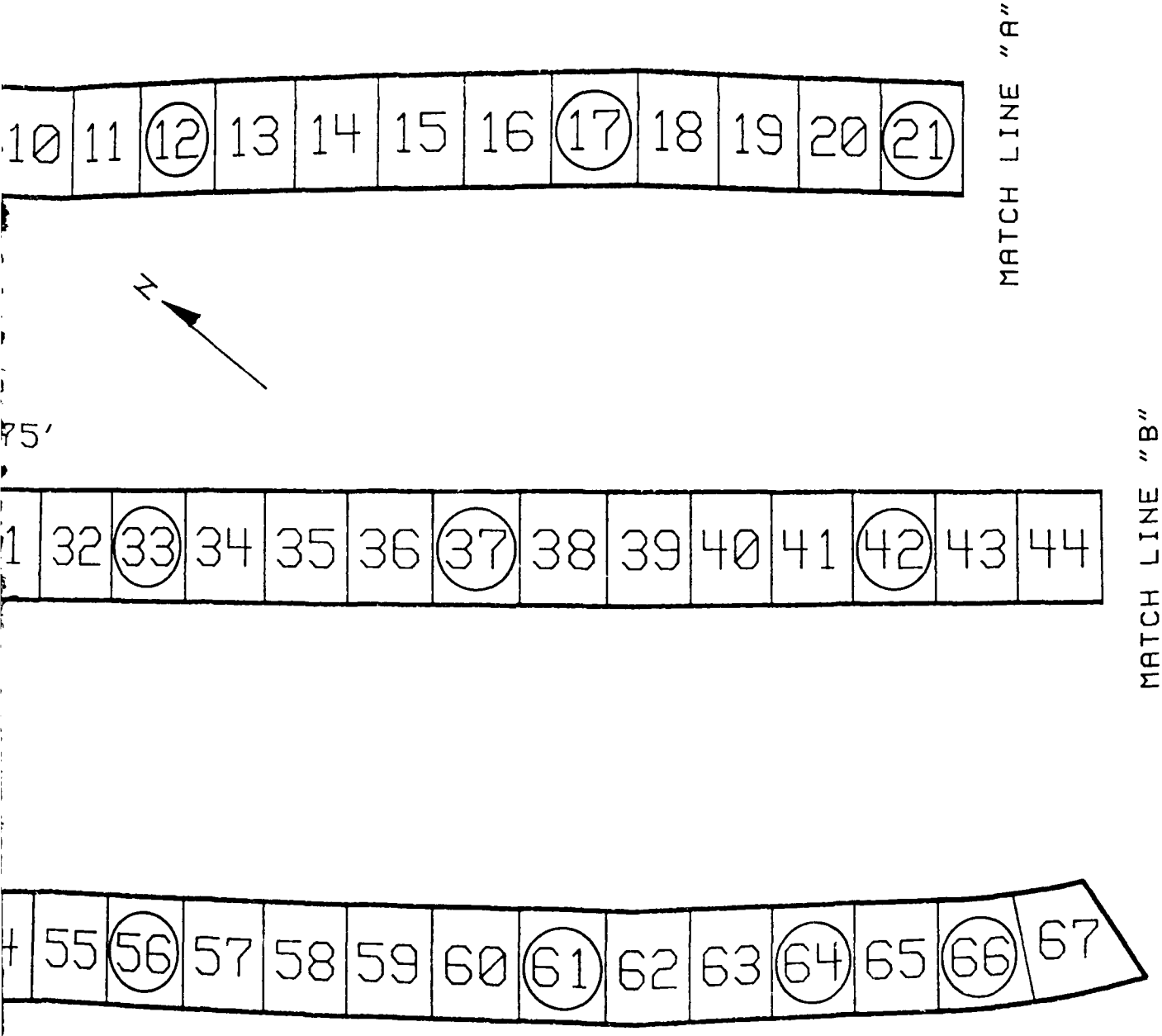


Figure 17. Sample unit lay



ample unit layout, Taxiway 4 (feature T5A)

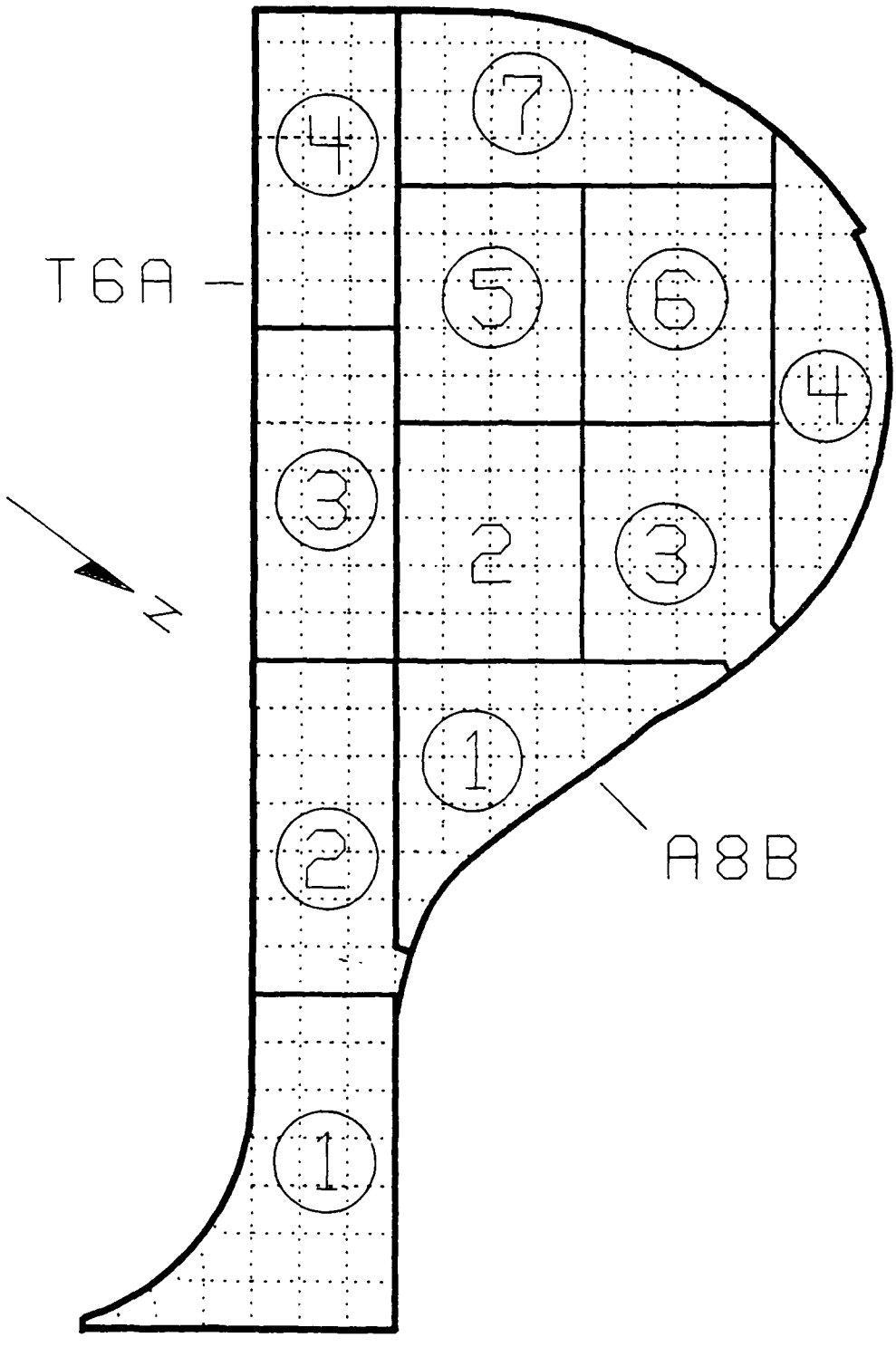


Figure 18. Sample unit layout, Taxiway 4A (feature T6A) and north warm-up apron - west side of runway (feature A8B)

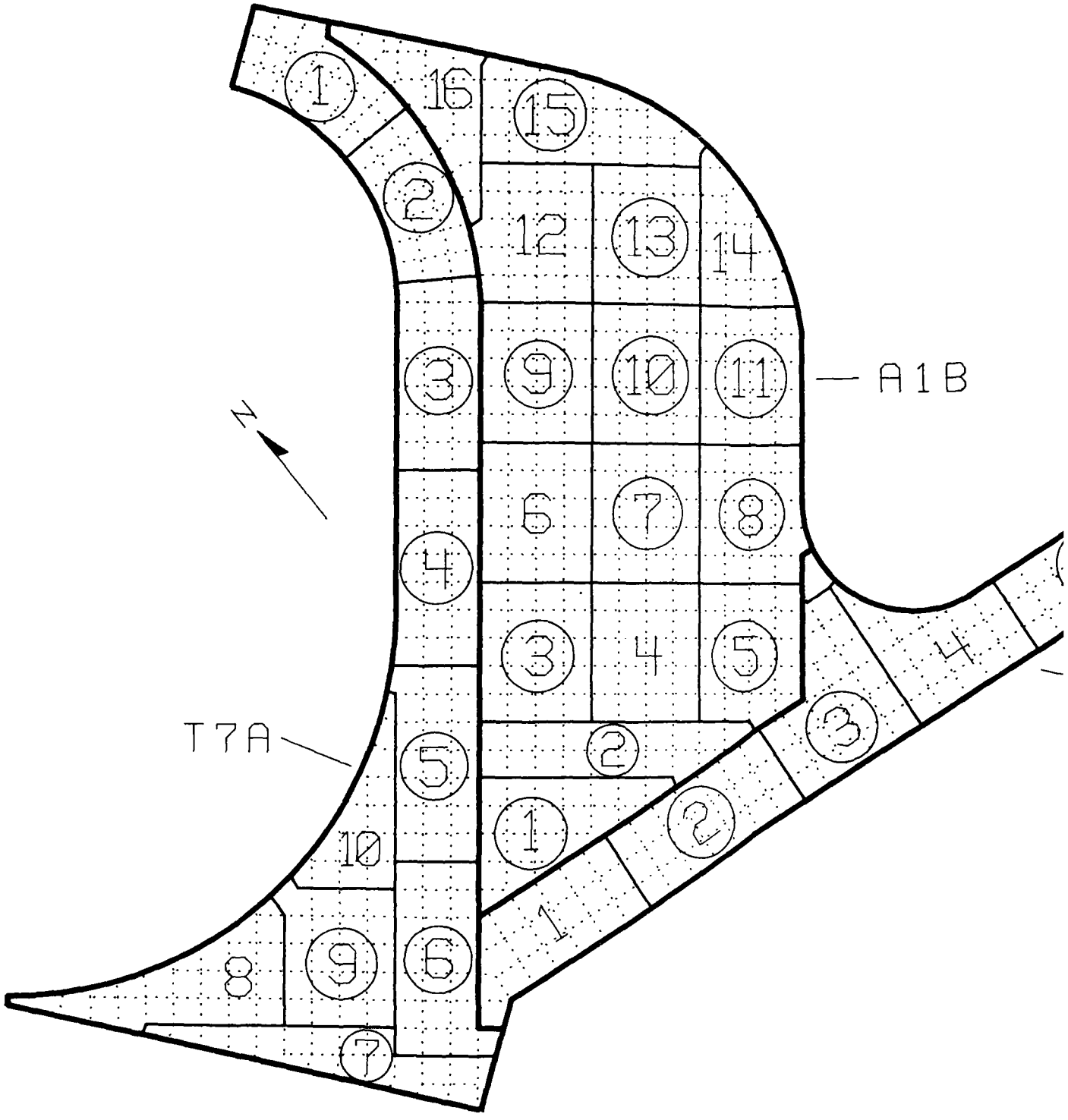
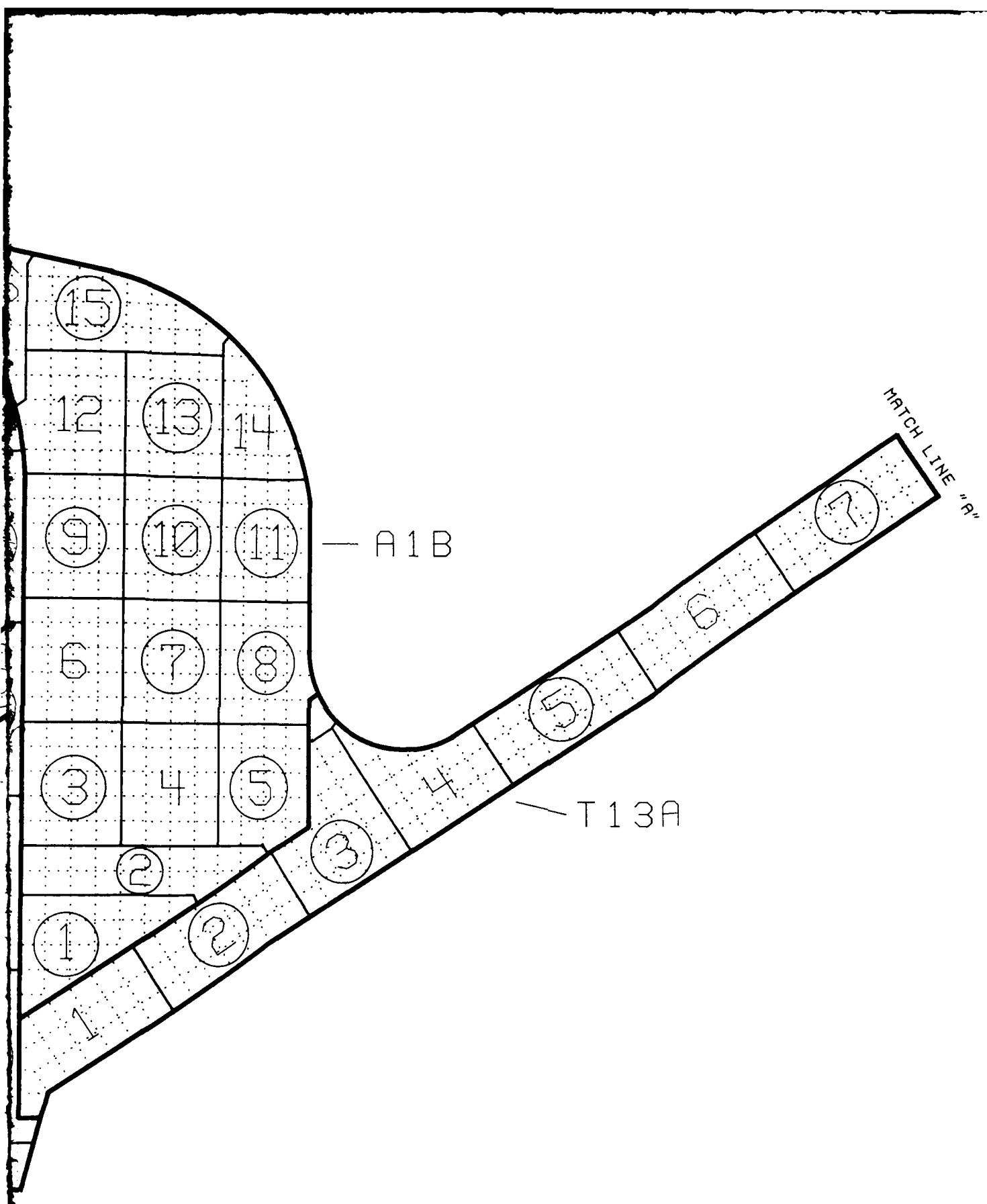


Figure 19. Sample unit layout, Taxiway 7A (feature T7A), Taxiway 8 (feature T13A), and



t, Taxiway 7A (feature T7A), Taxiway 8 (feature T13A), and south warm-up apron (SAC) (feature A1B)

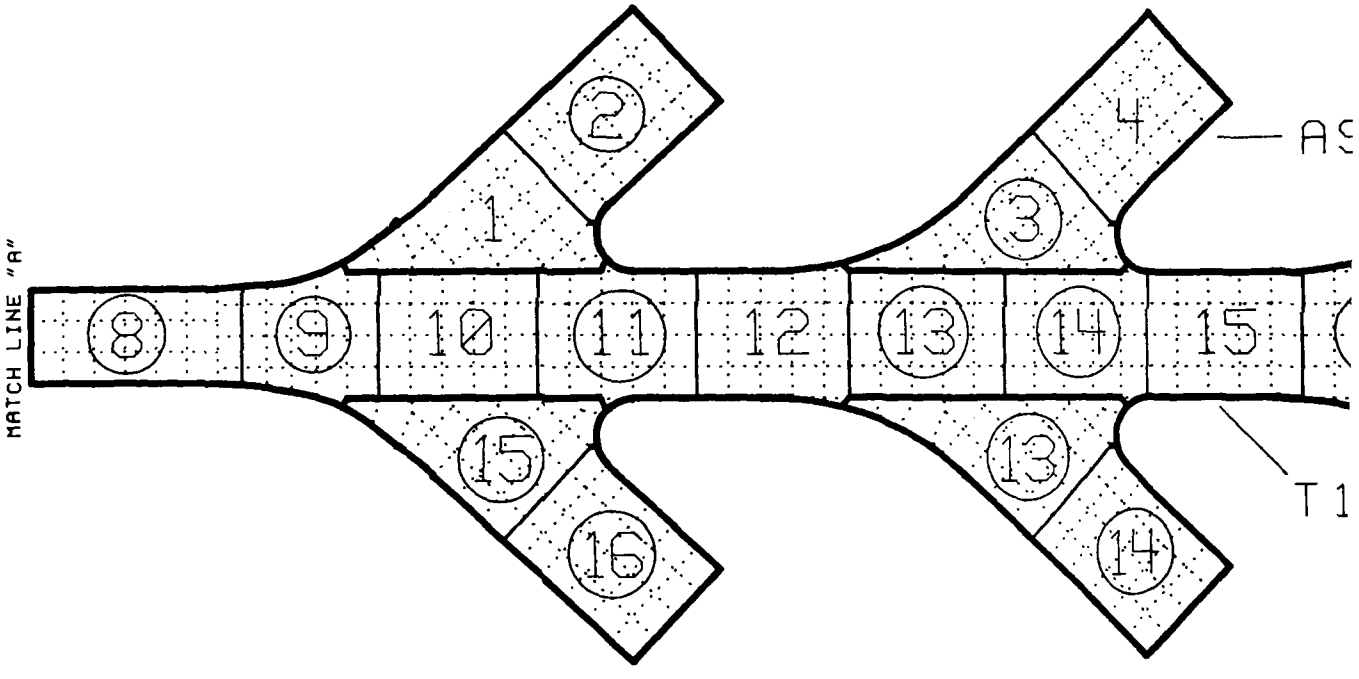
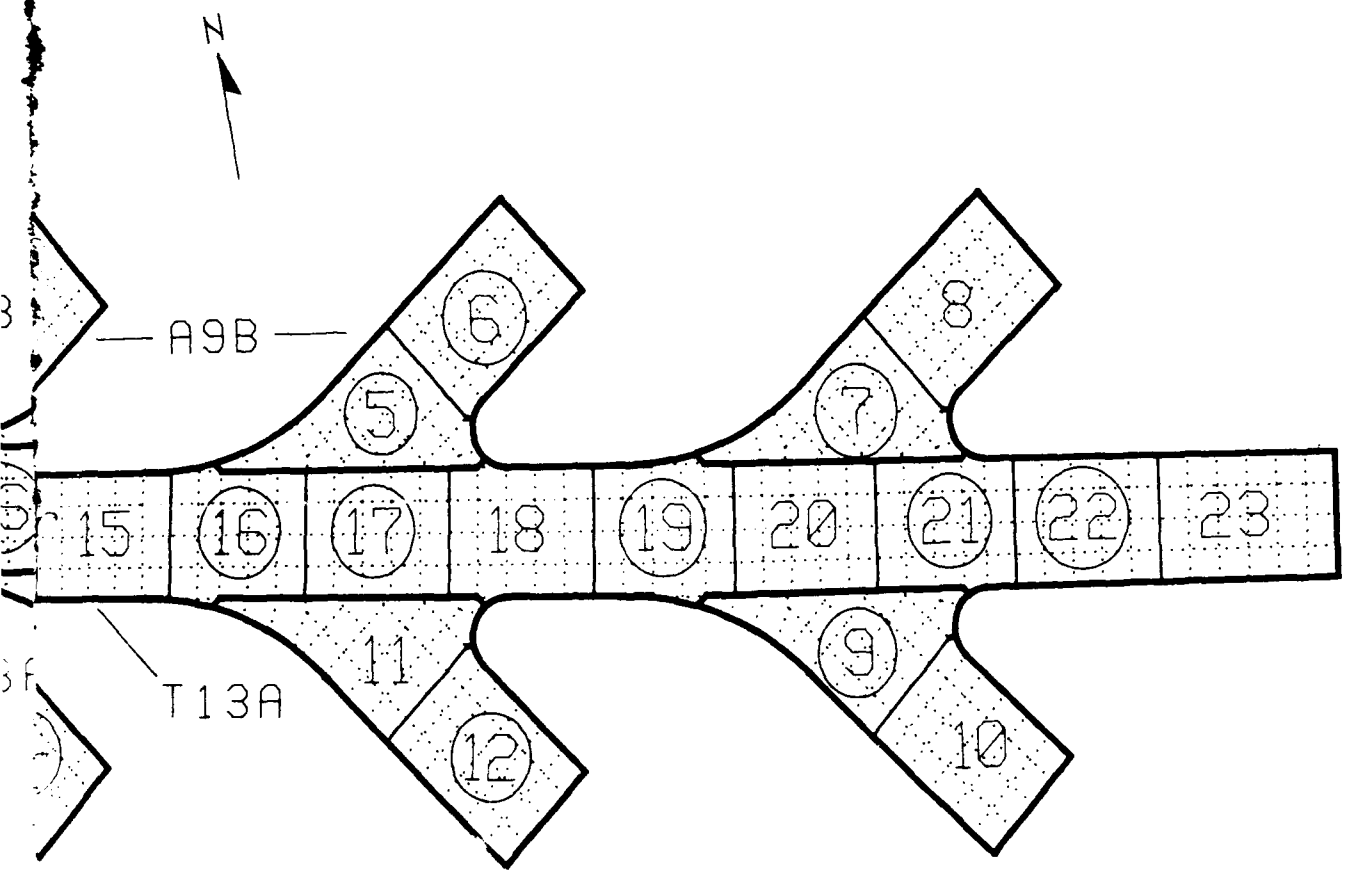


Figure 20. Sample unit layout, Taxiway 8 (



. Taxiway 8 (feature T13A) and SAC alert apron (feature A9B)

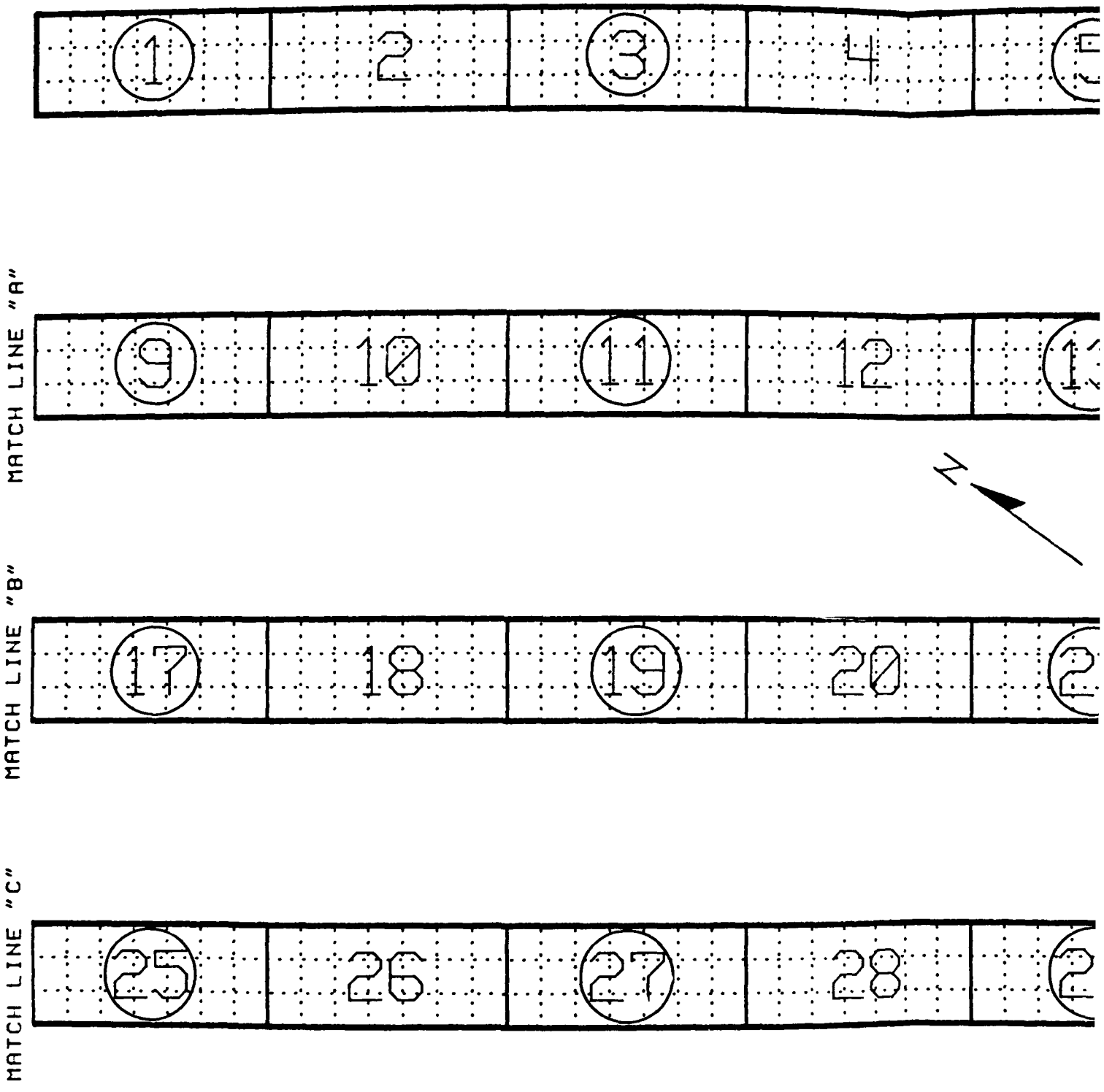


Figure 21. Sample unit layout, Taxiw

e unit layout, Taxiway 7 (feature T8A)

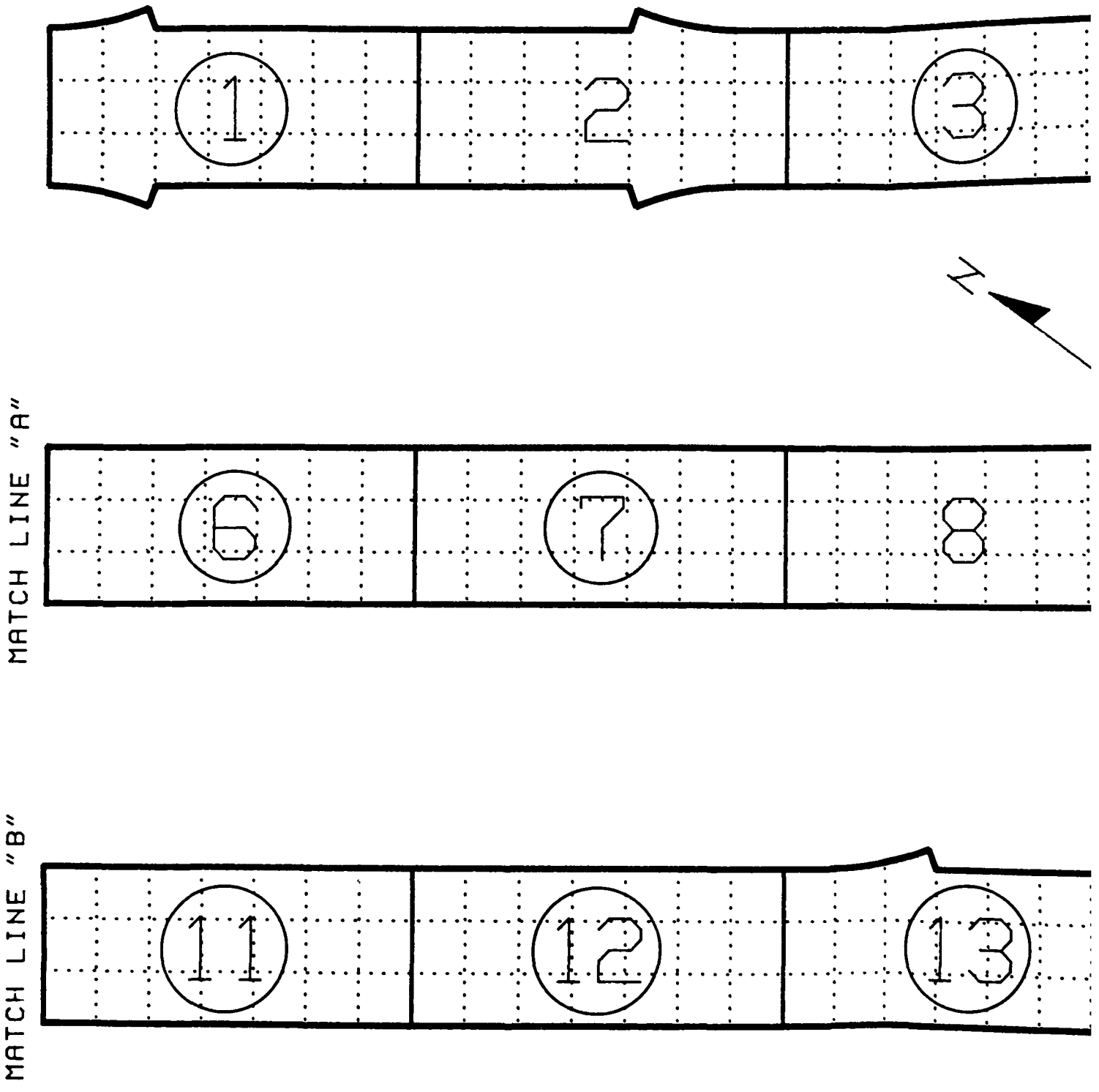
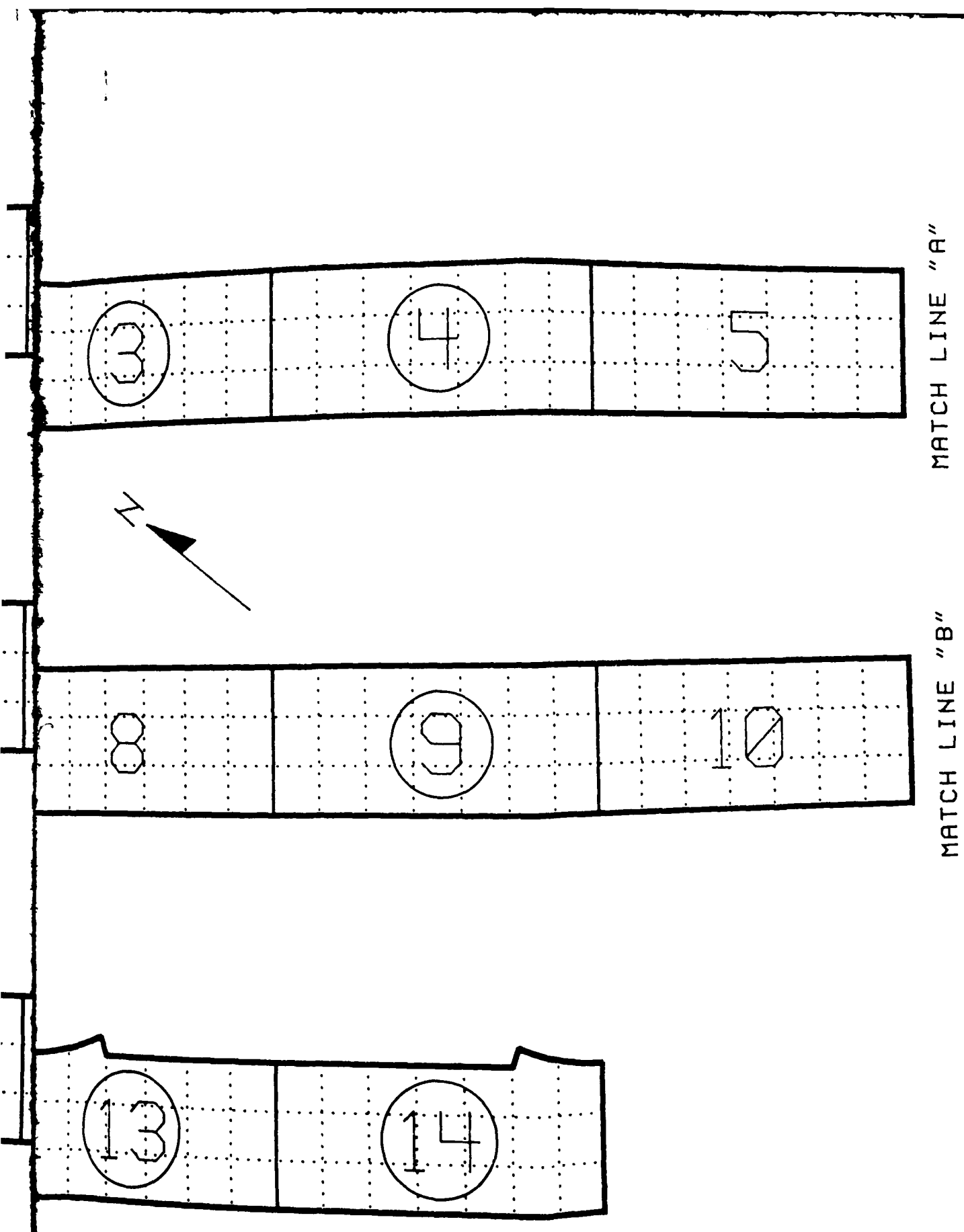


Figure 22. Sample unit layout, Ta



Sample unit layout, Taxiway 6 (feature T9A)

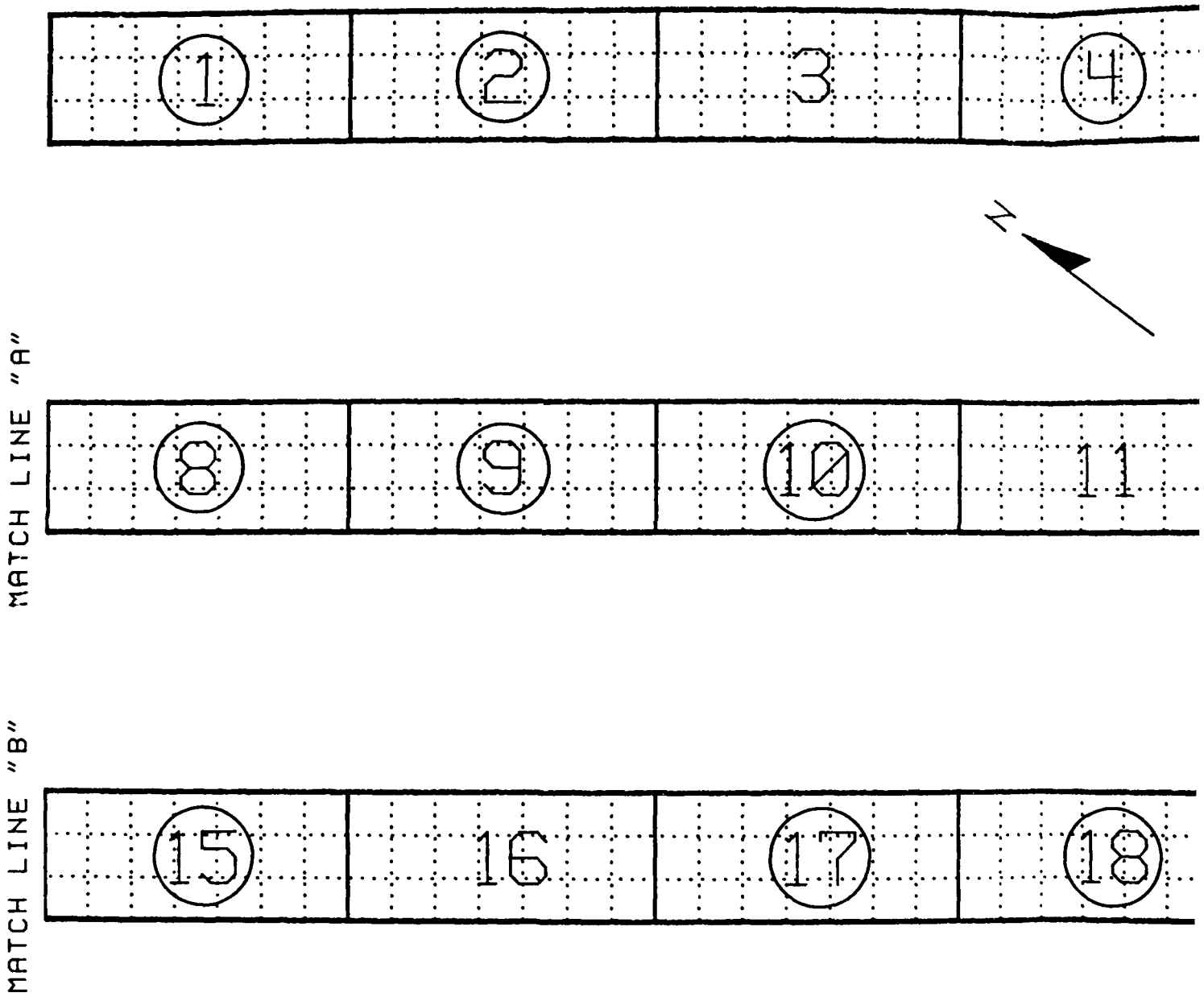
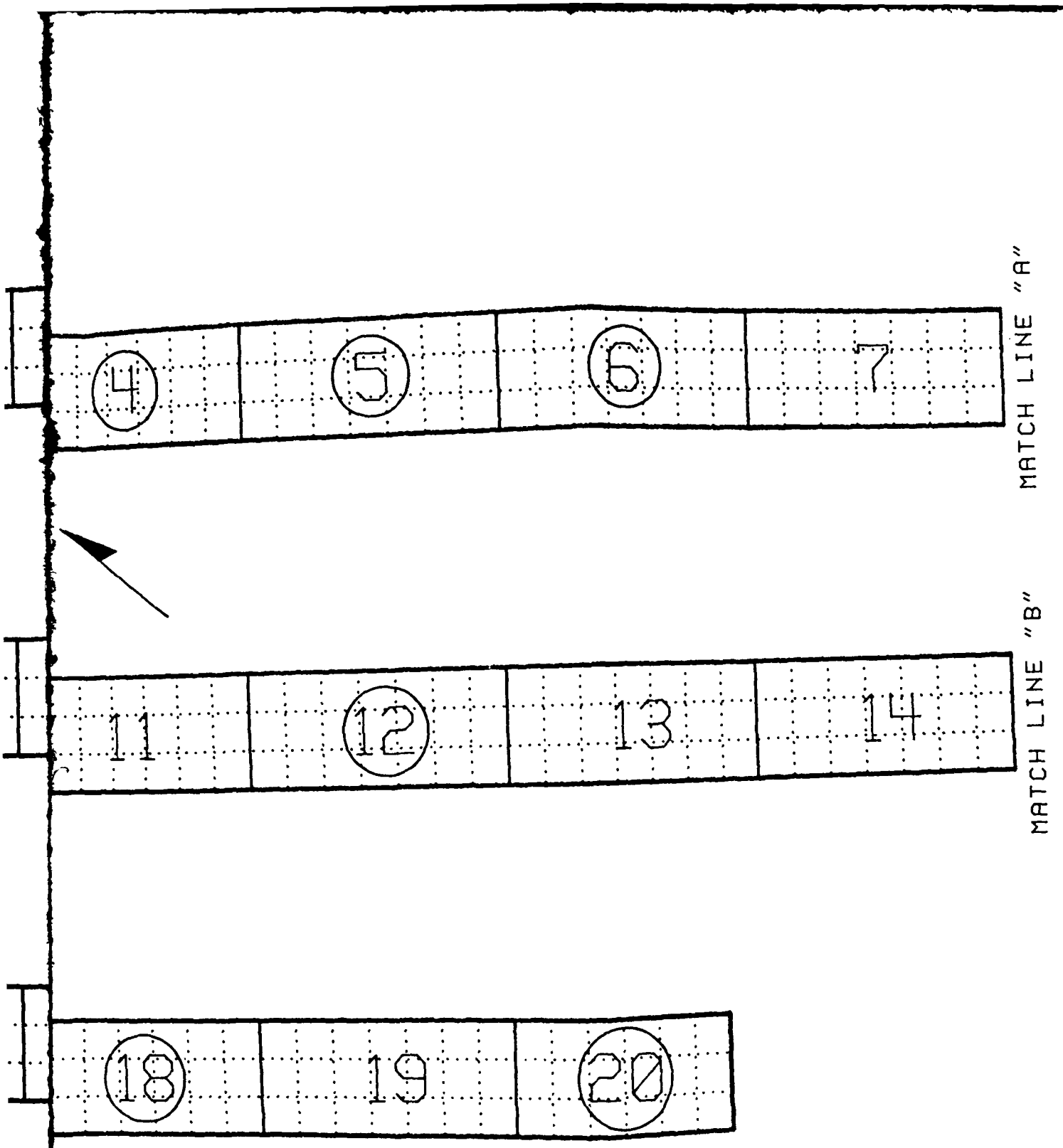


Figure 23. Sample unit layout, Tax



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nit layout, Taxiway 5 (feature T10A)

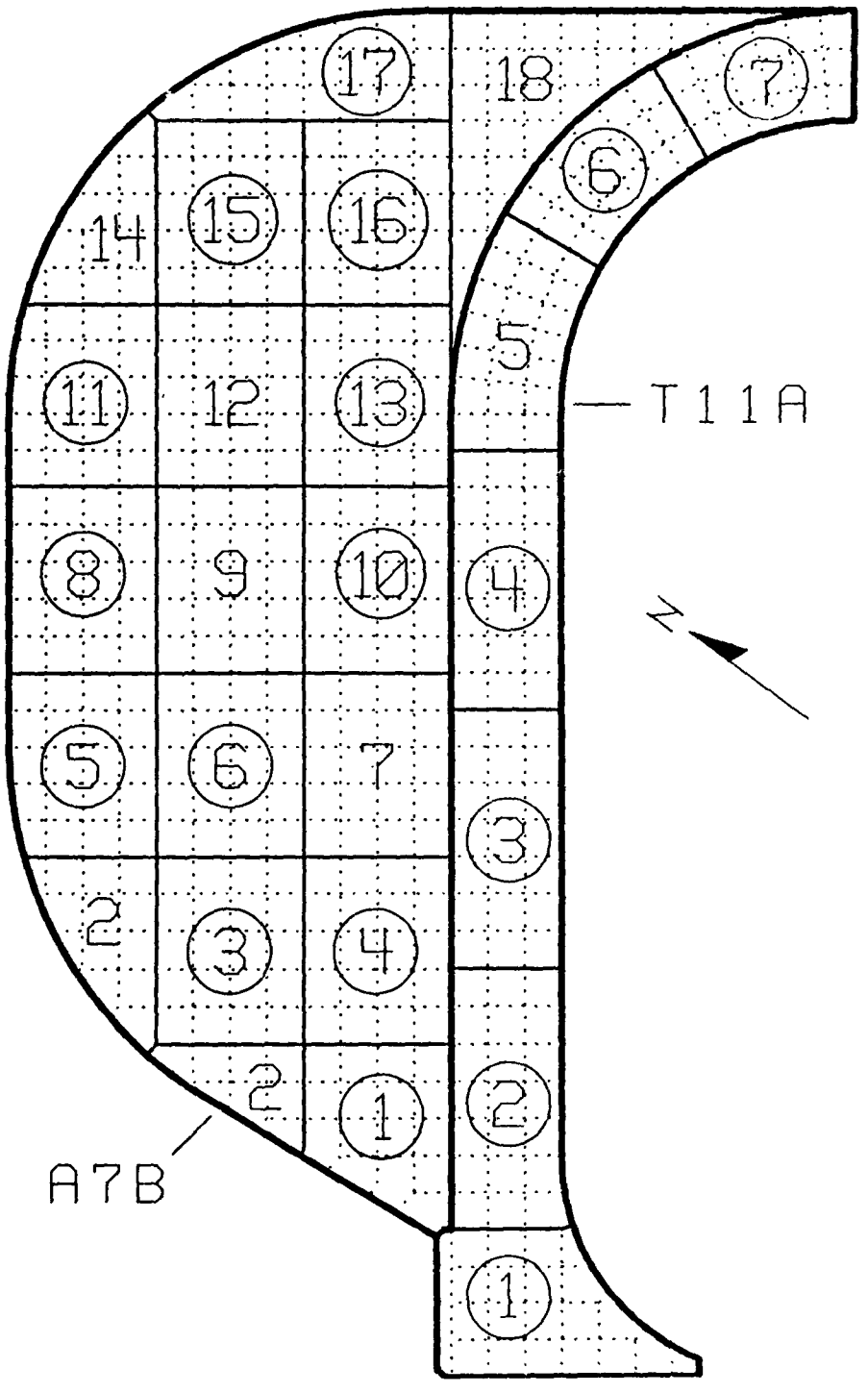


Figure 24. Sample unit layout, Taxiway 5A (feature T11A) and north warm-up apron - SAC (feature A7B)

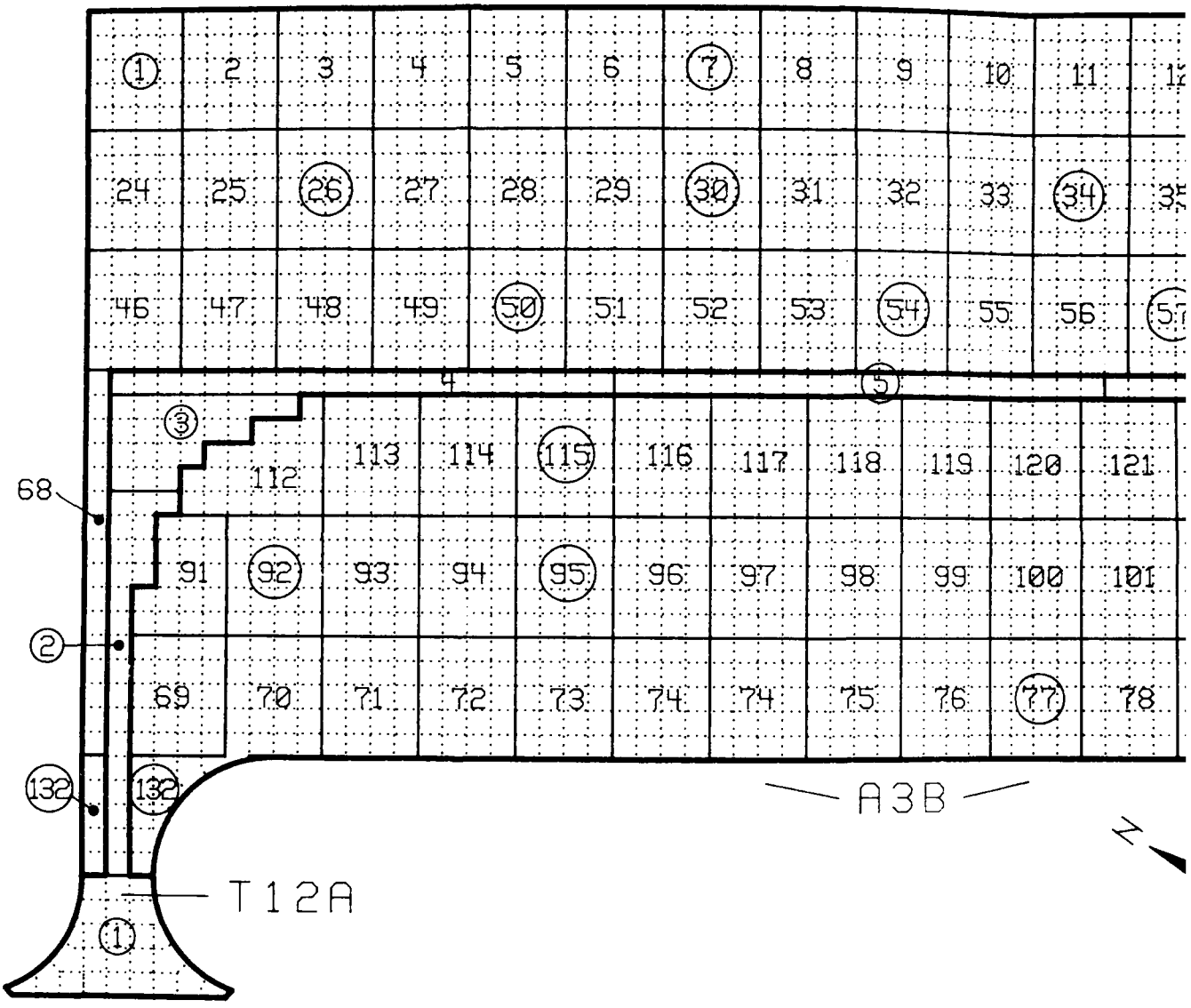
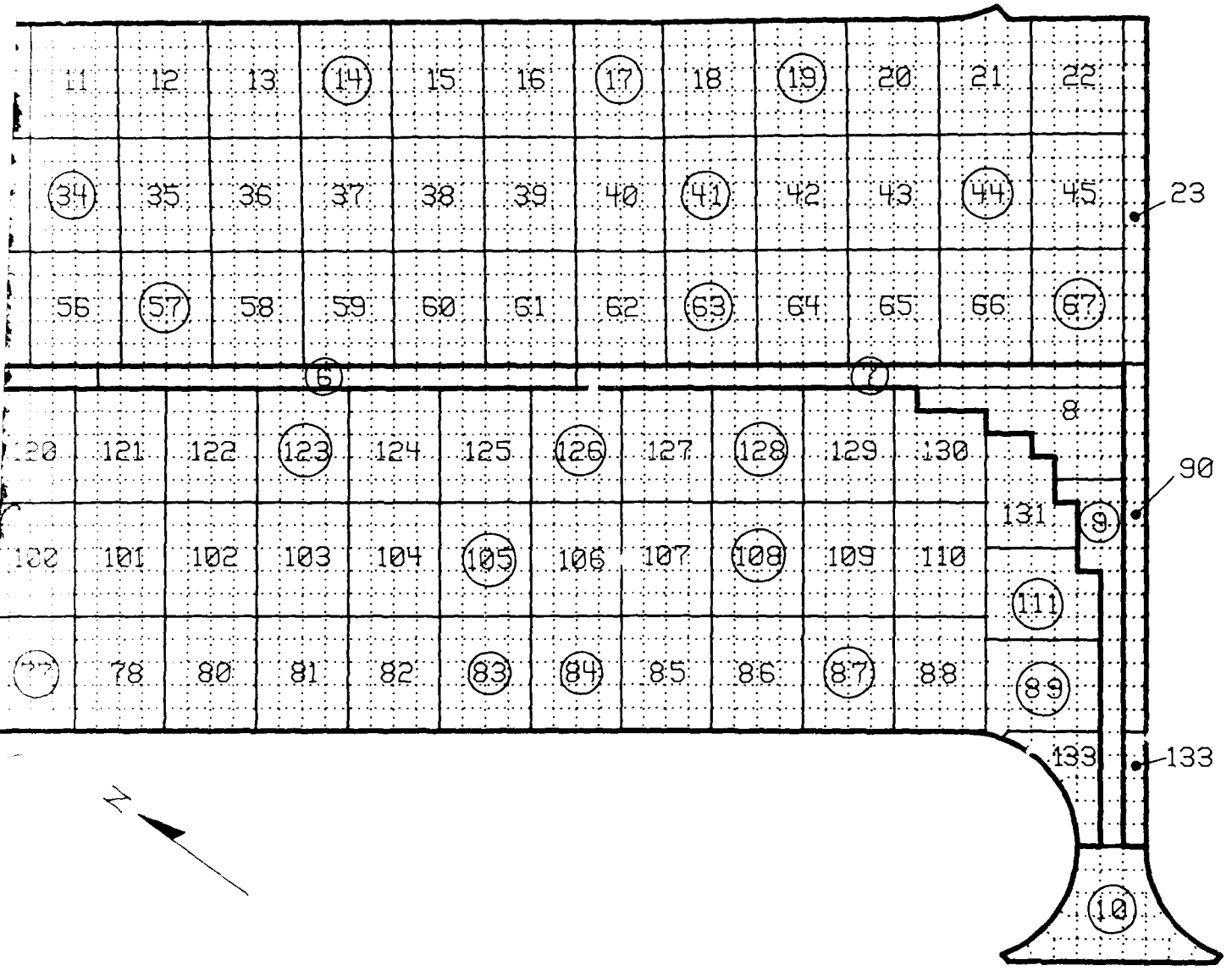


Figure 25. Sample unit layout, SAC maintenance apron taxiway



apron taxiway (feature T12A) and SAC maintenance apron (feature A3B)

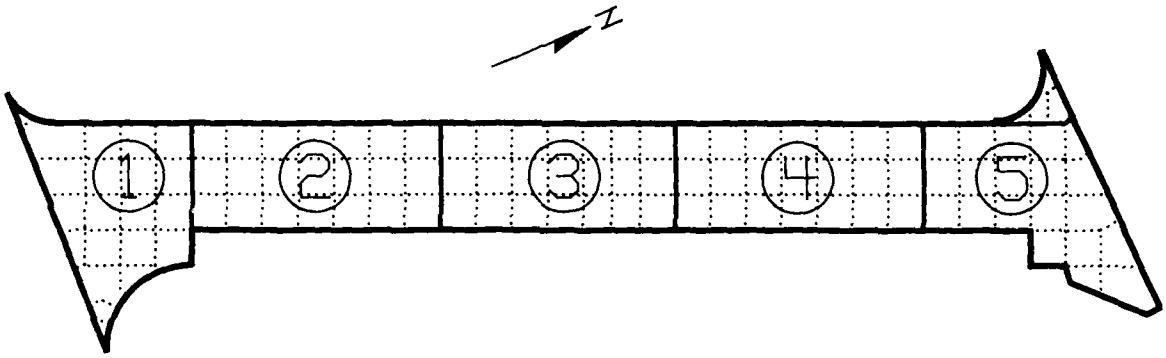
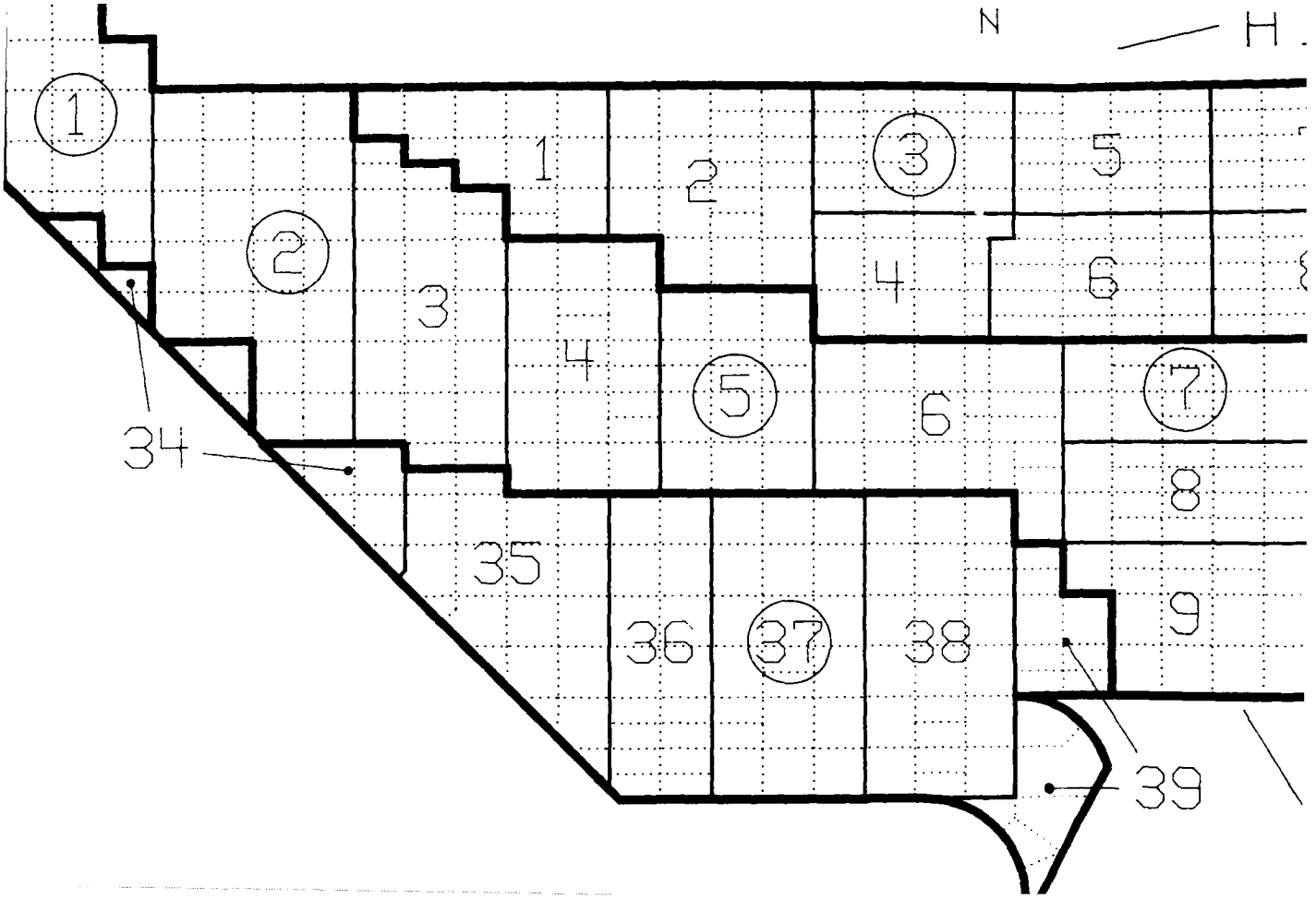


Figure 26. Sample unit layout, Taxiway 1B (feature T14A)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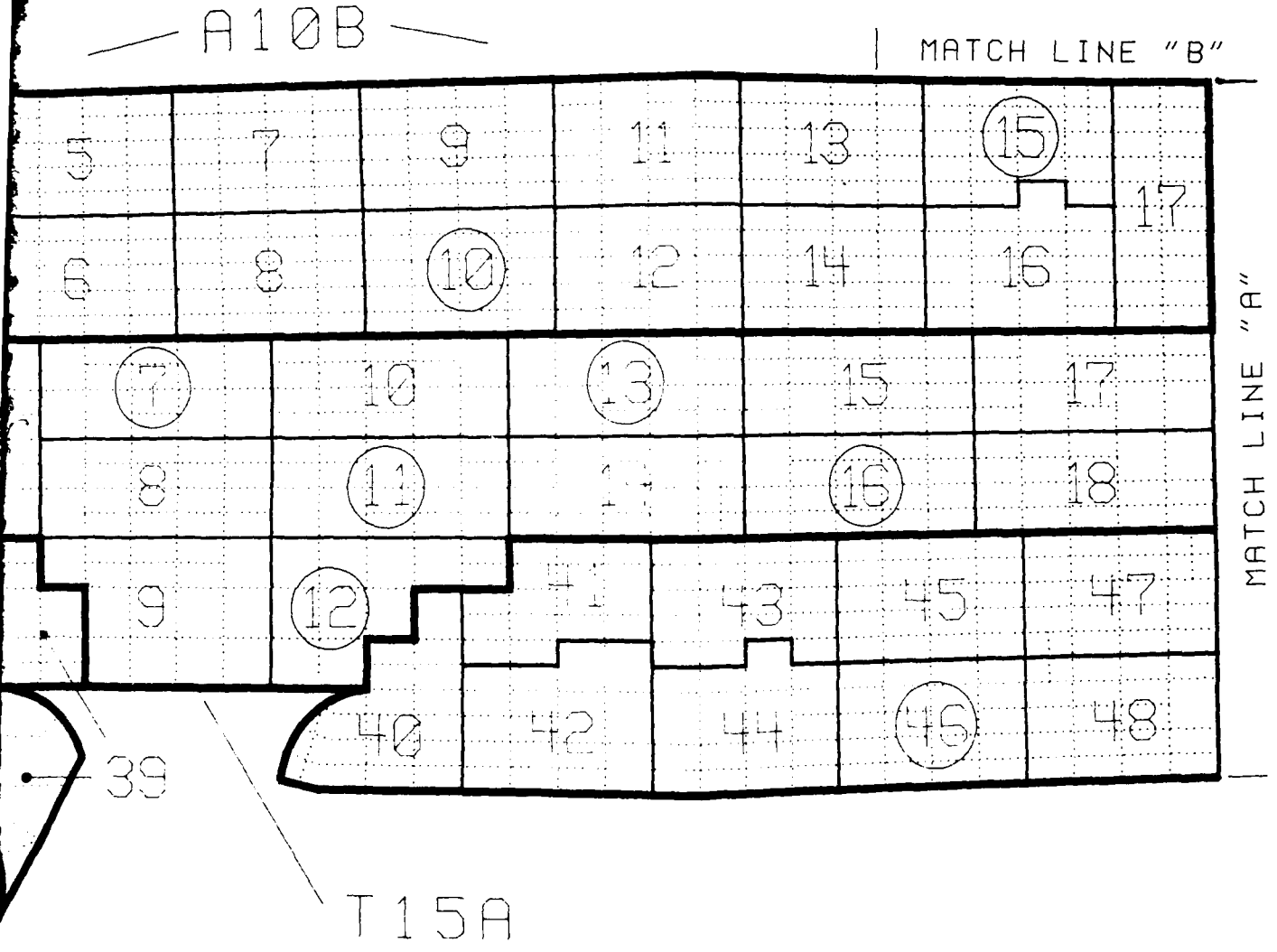


inal apron taxiway (feature T15A) and original apron (feature A10B)

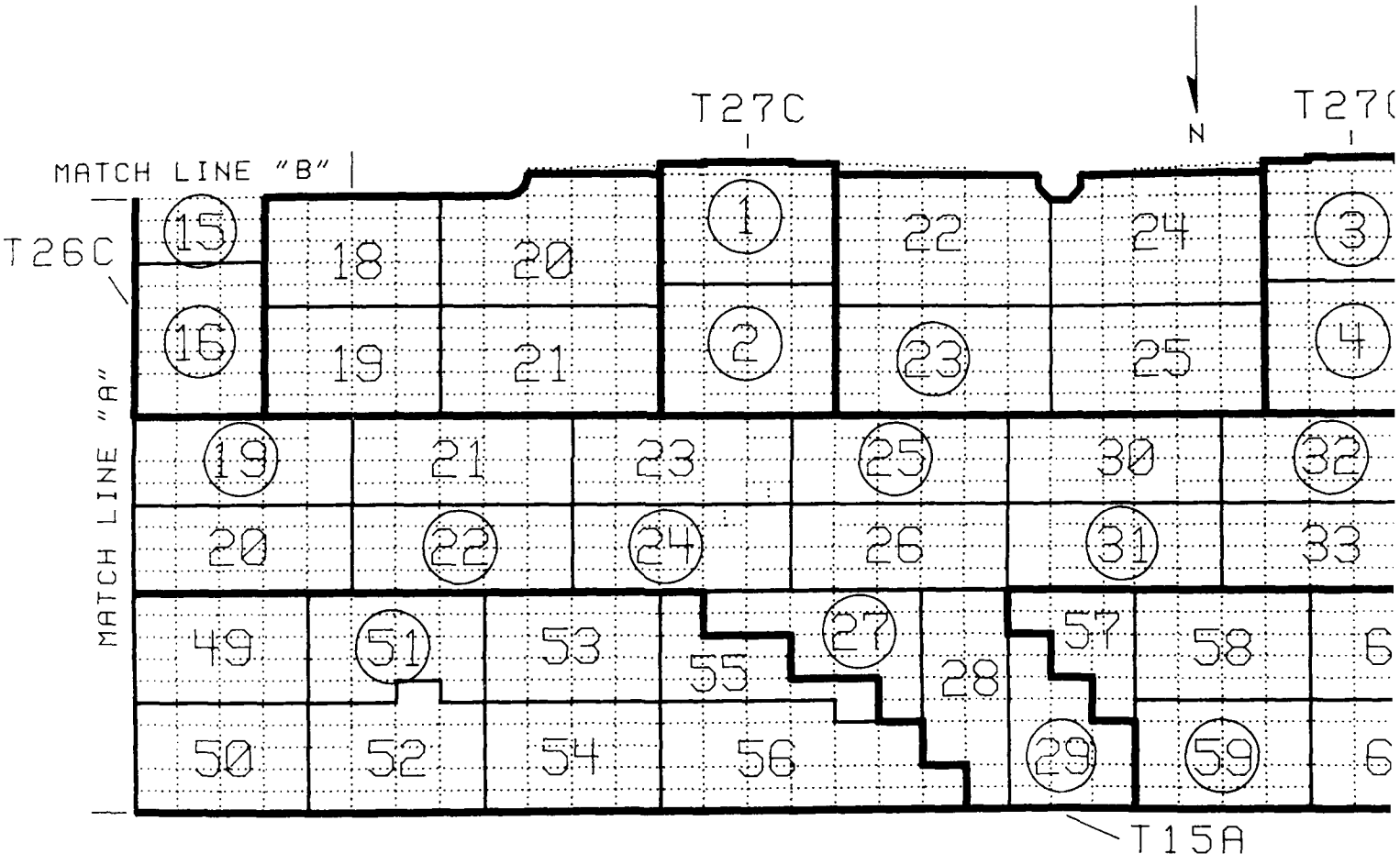
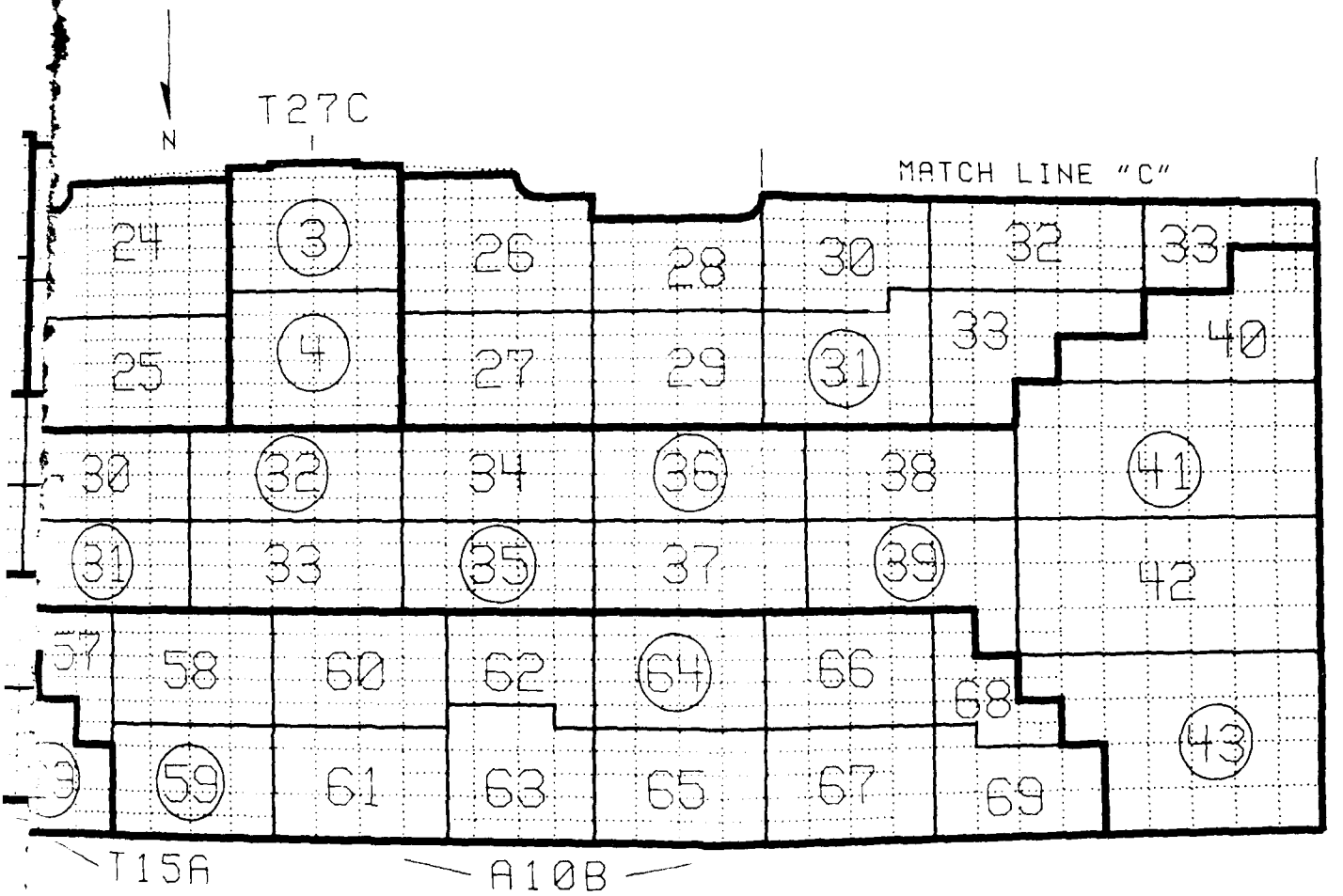


Figure 28. Sample unit layout, original apron taxiway (feature T15A); or
125 (feature T26C) and north of building 110 (feature T27C);



ıxiway (feature T15A); original apron taxiway east of buildings 110 and
ıilding 110 (feature T27C); and original apron (feature A10B)

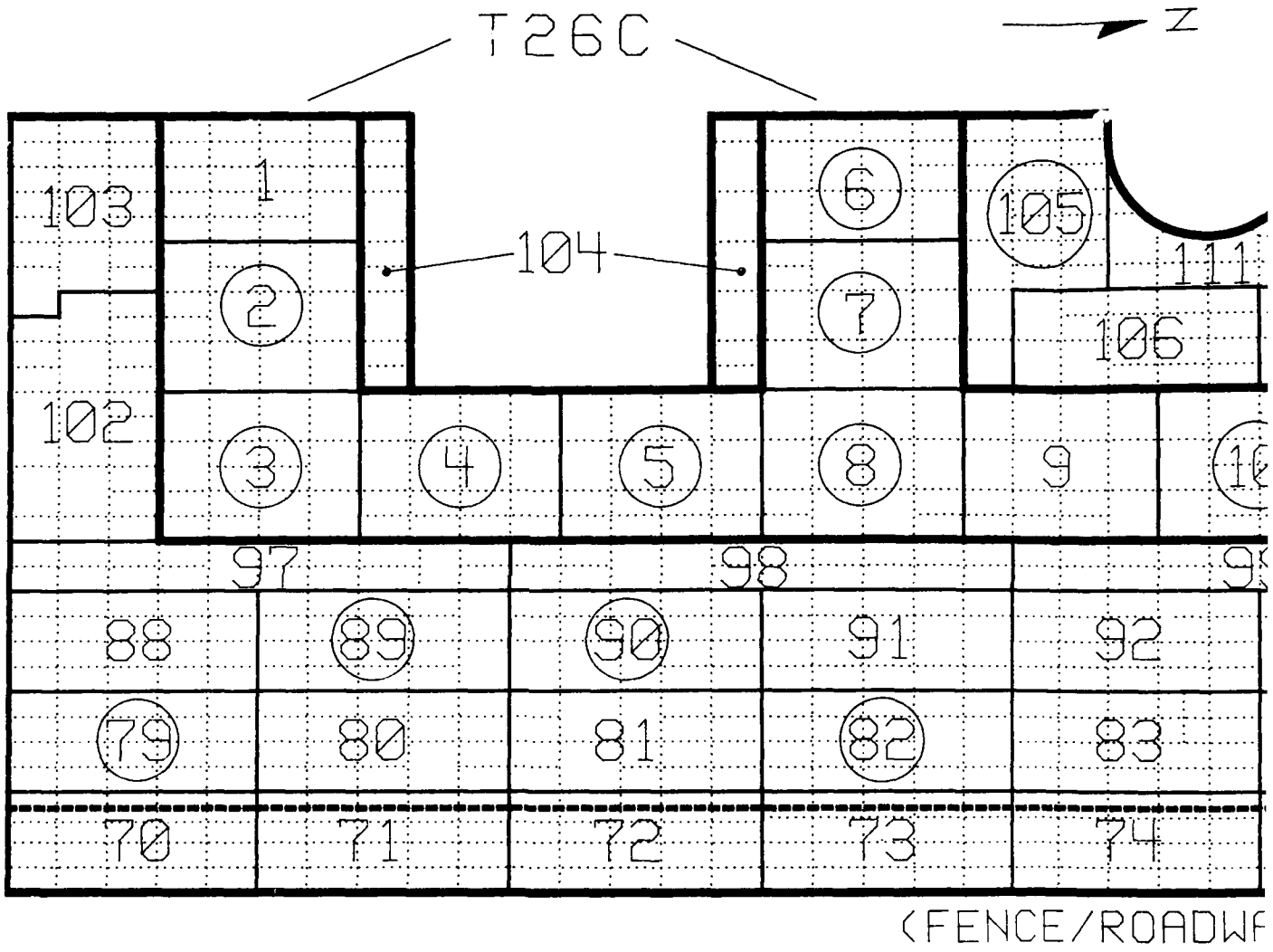
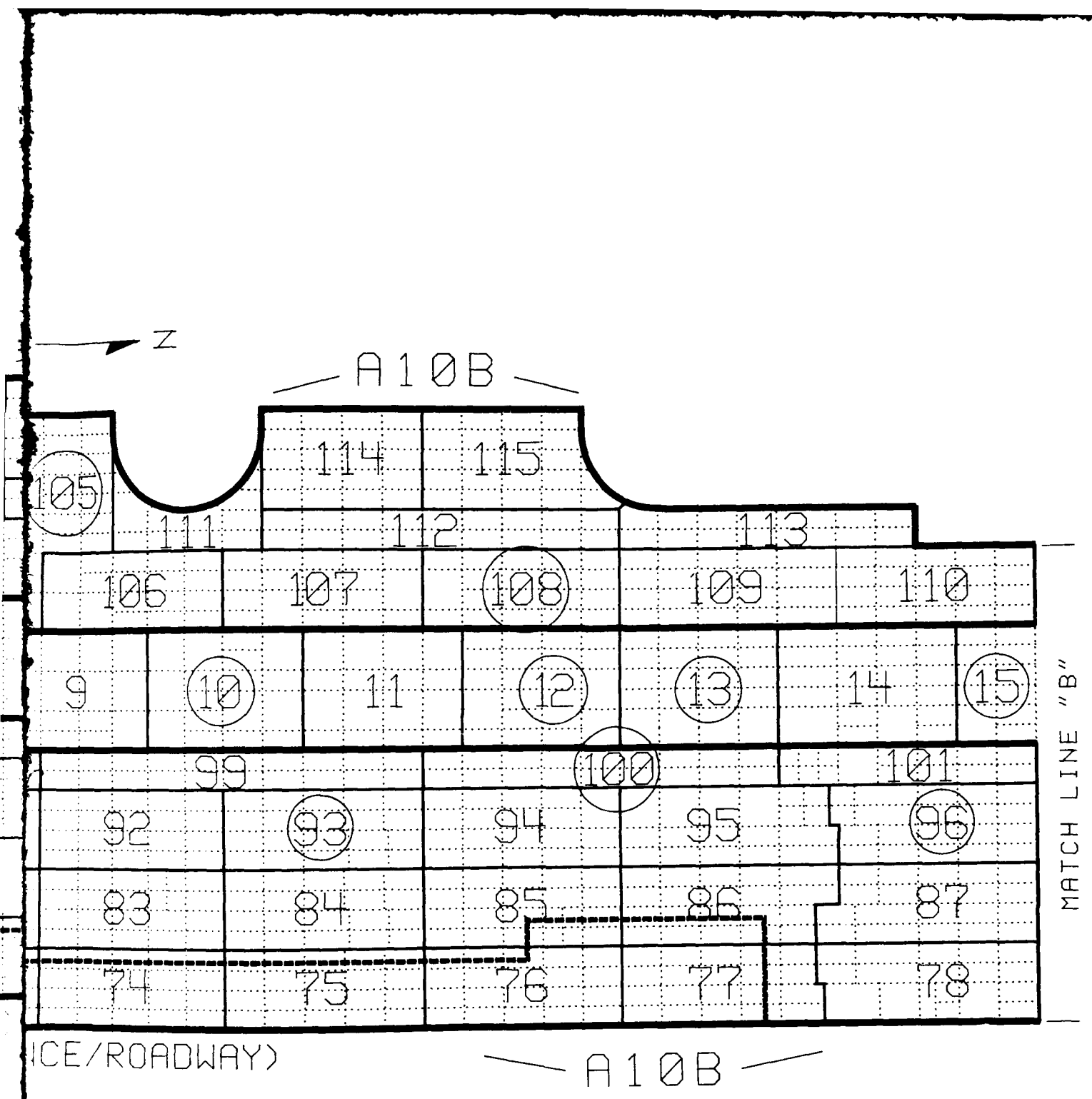
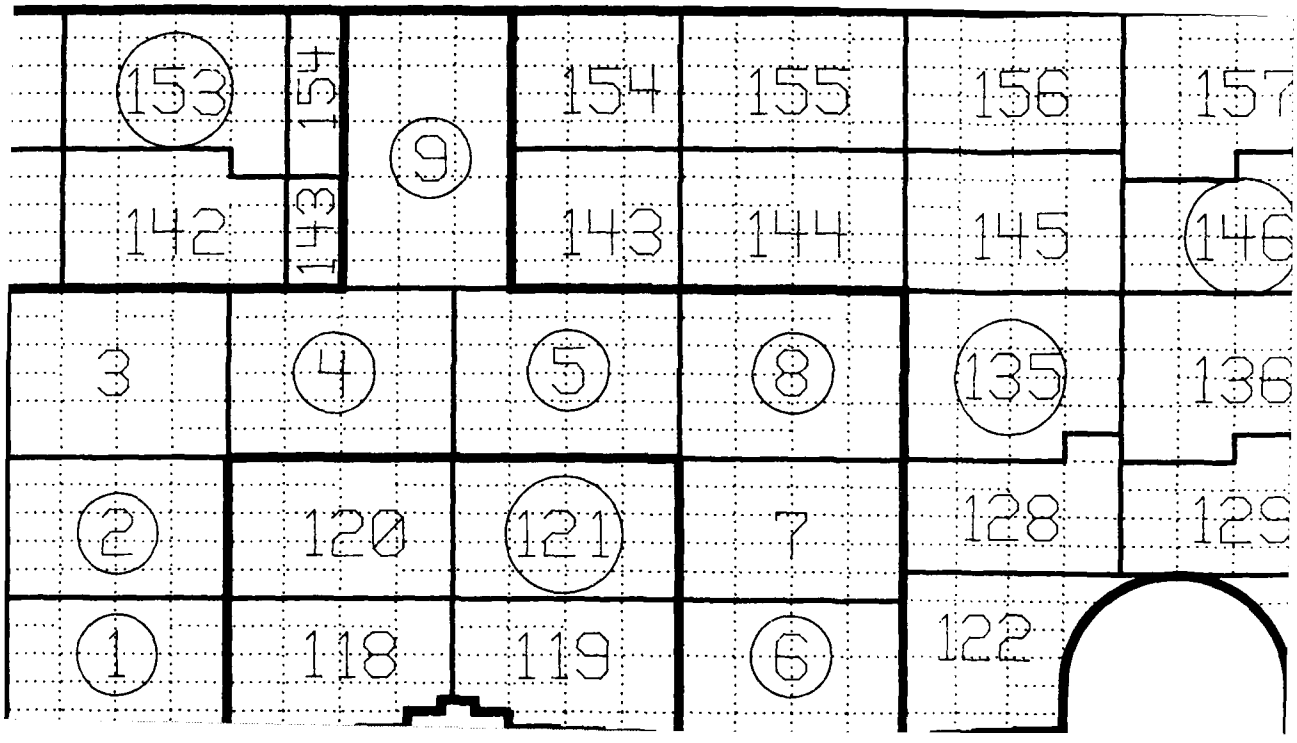


Figure 29. Sample unit layout, original apron ta
(feature T26C) and original ap



ut, original apron taxiway east of buildings 110 and 125
26C) and original apron (feature A10B)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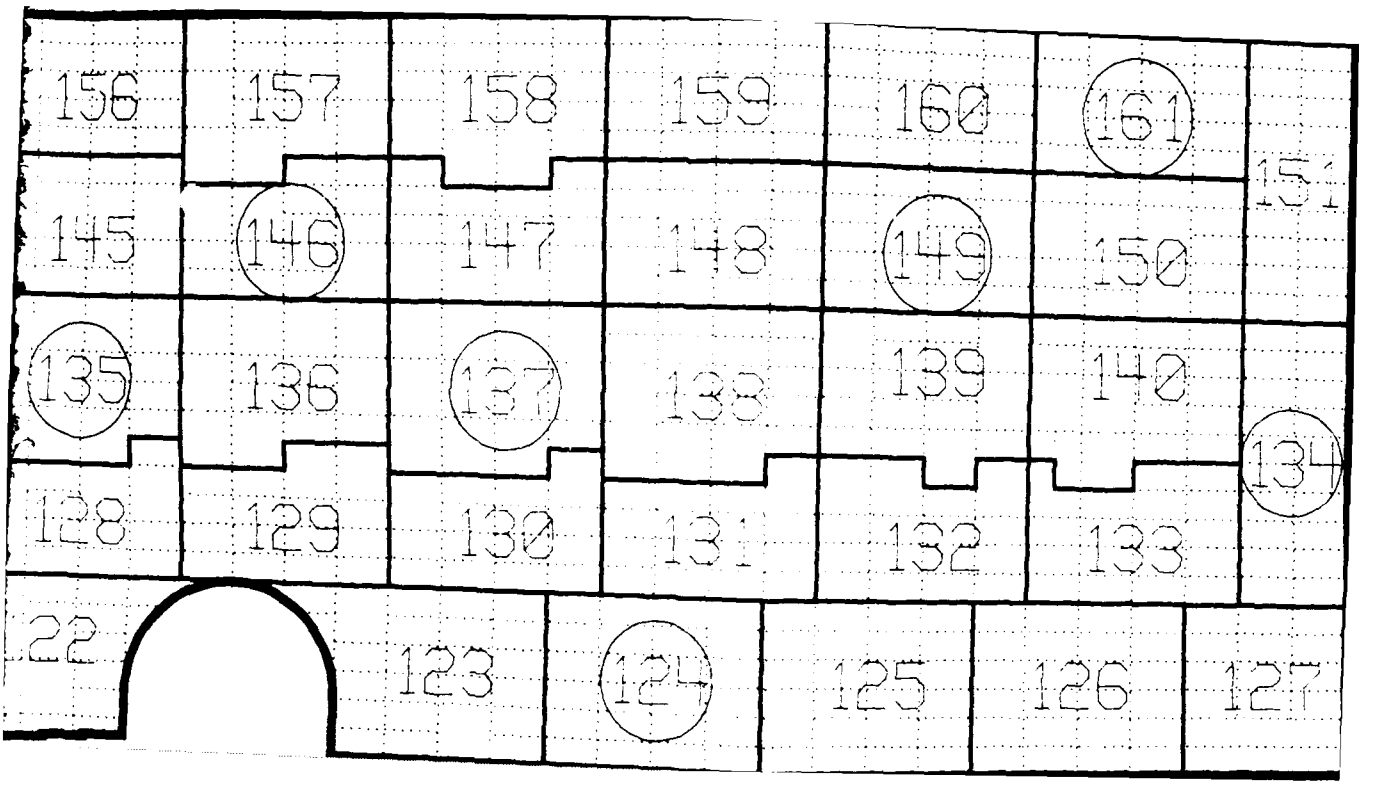
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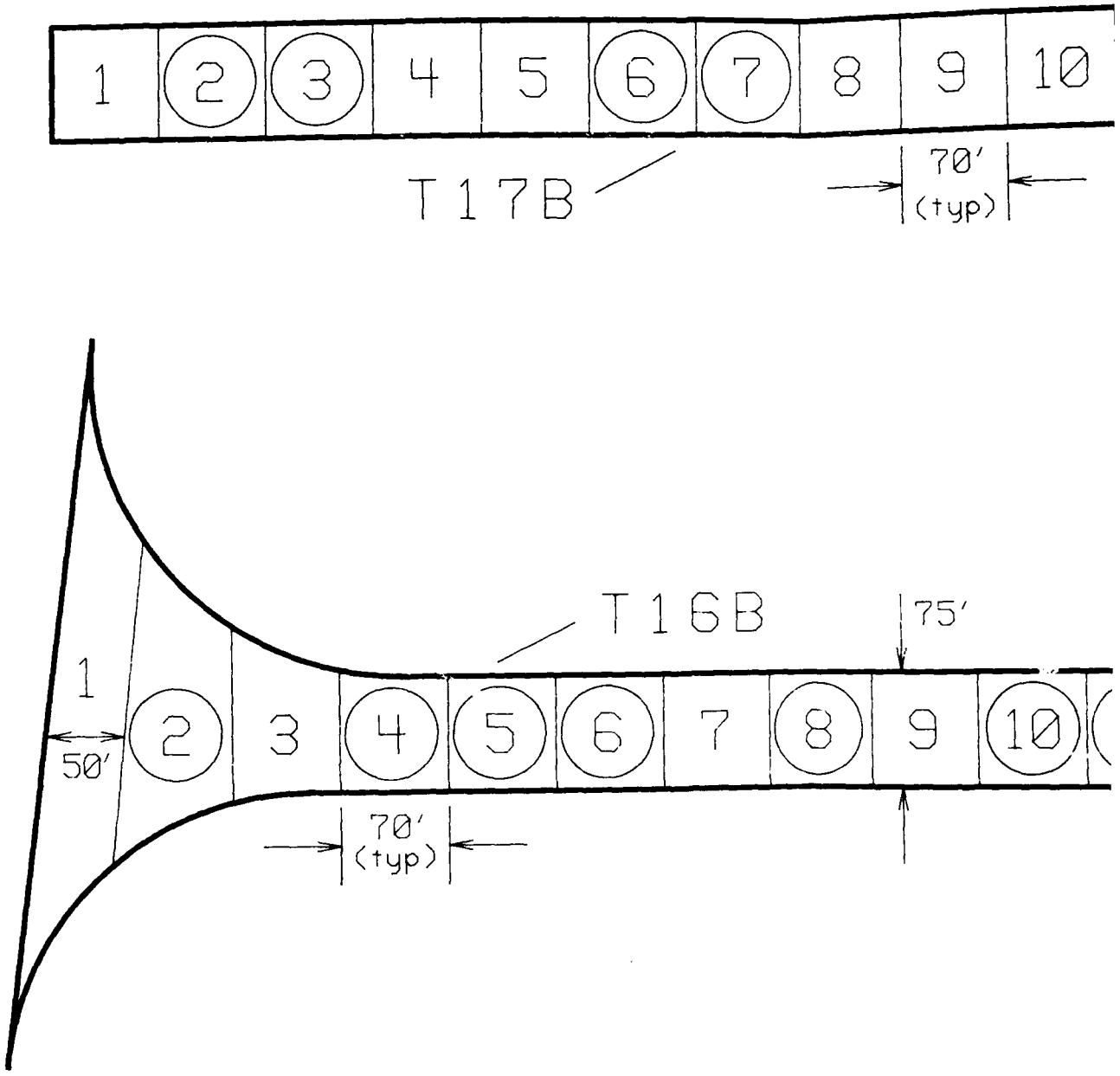
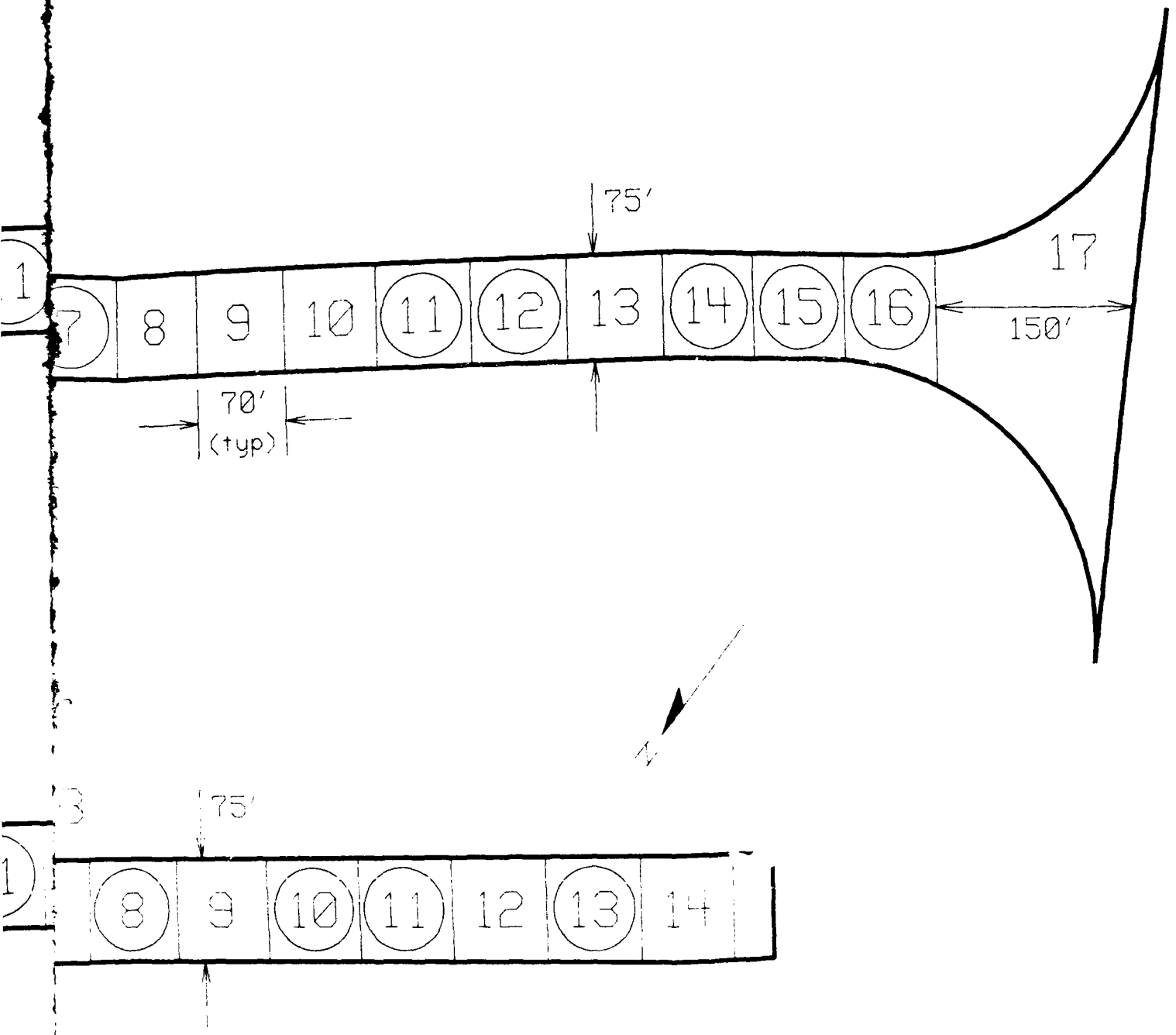


Figure 31. Sample unit layout, Taxiway 2 (featur



8B)

nit layout, Taxiway 2 (feature T18B) and Taxiway 2A (feature T17B)

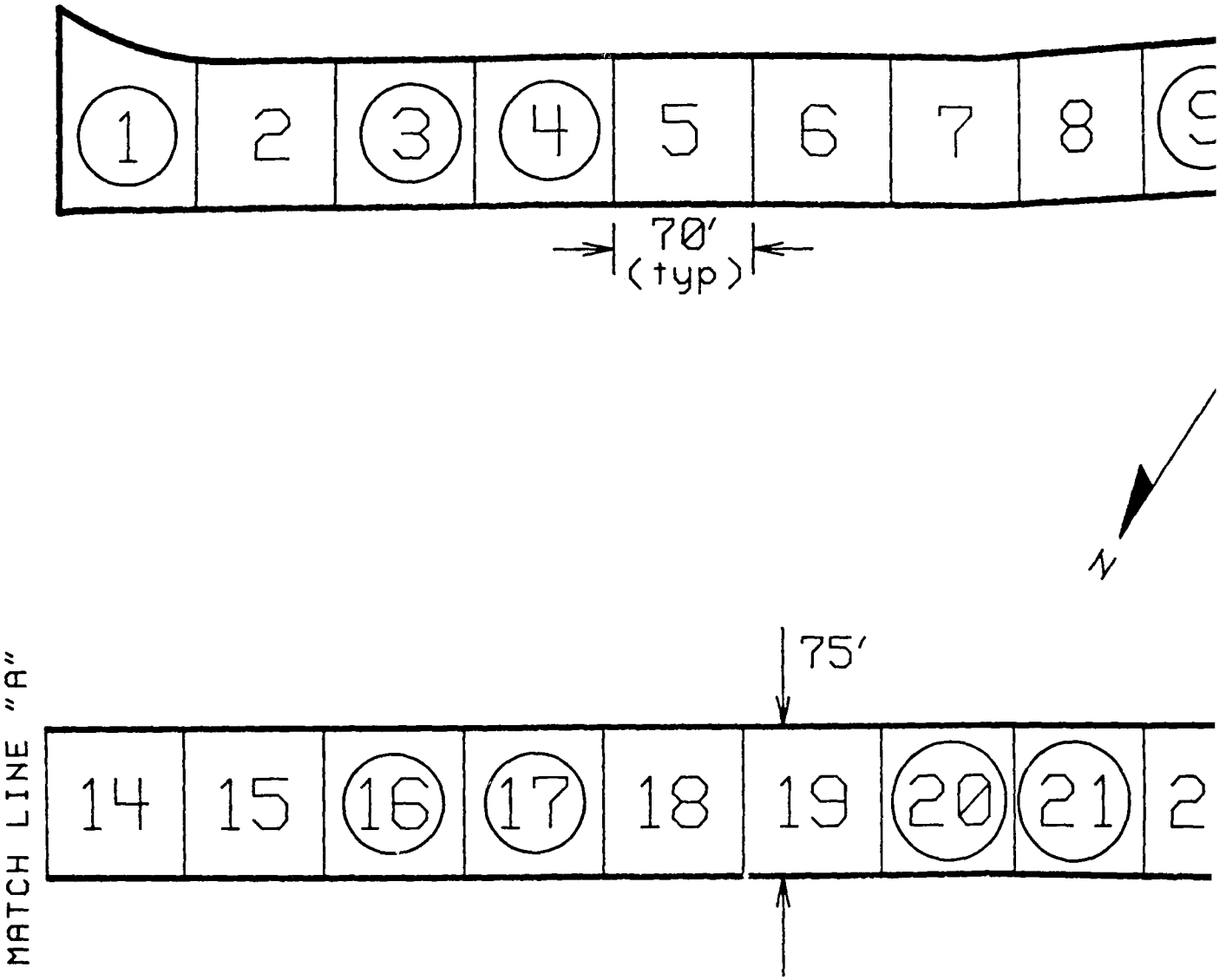
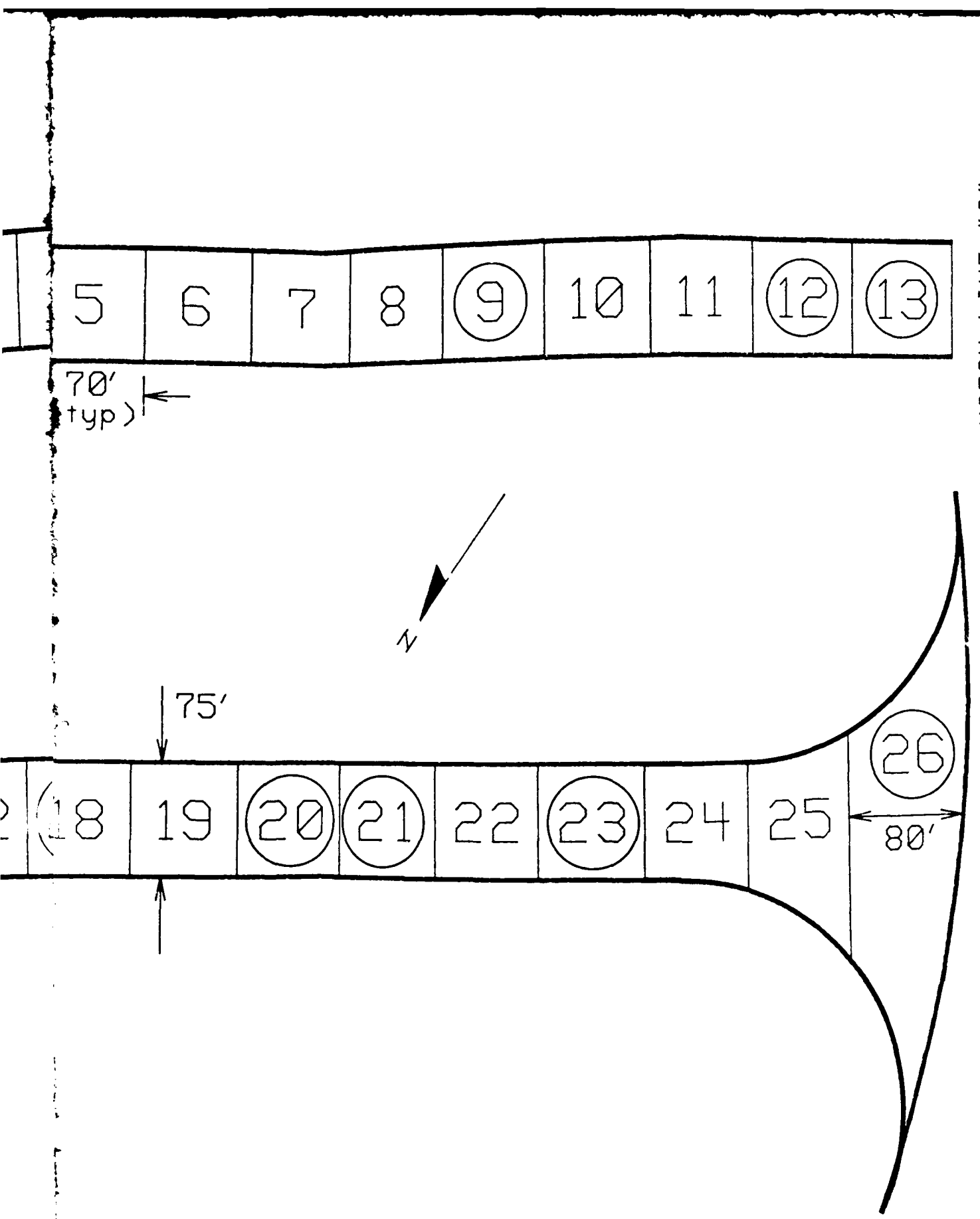


Figure 32. Sample unit layout, Taxiway 3A (fea



re T19ure 32. Sample unit layout, Taxiway 3A (feature T19B)

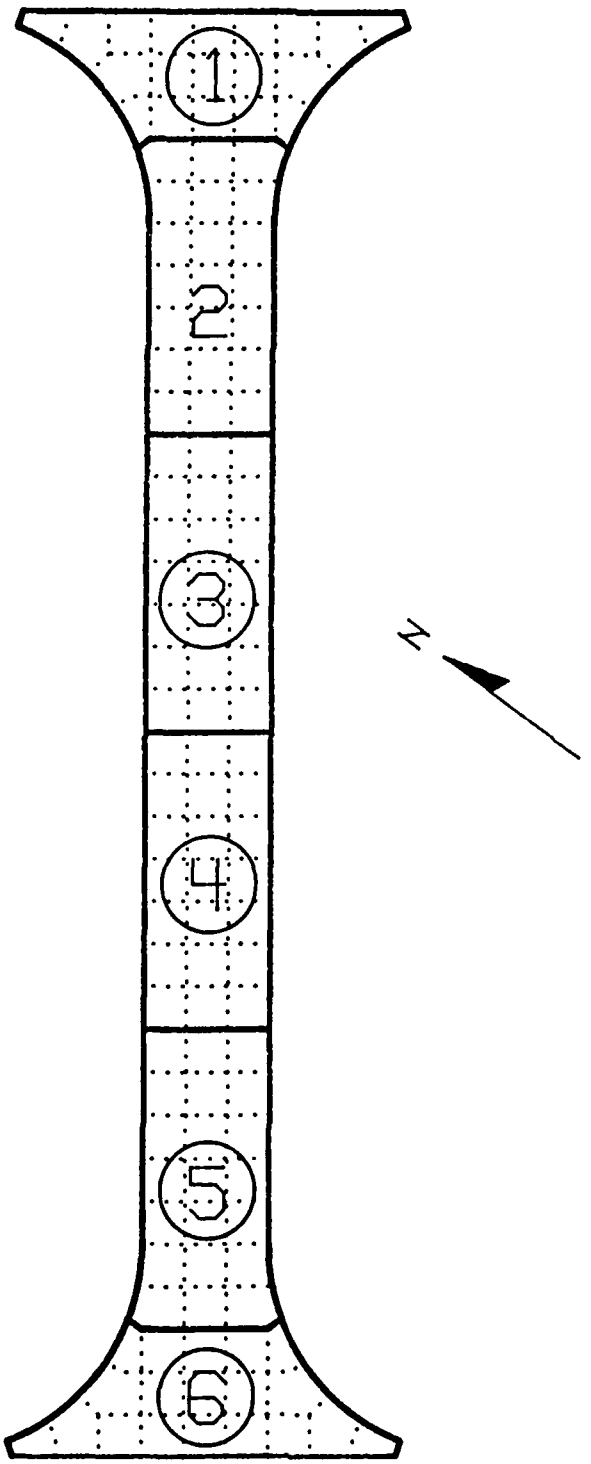


Figure 33. Sample unit layout, Taxiway 6A (feature T21B)

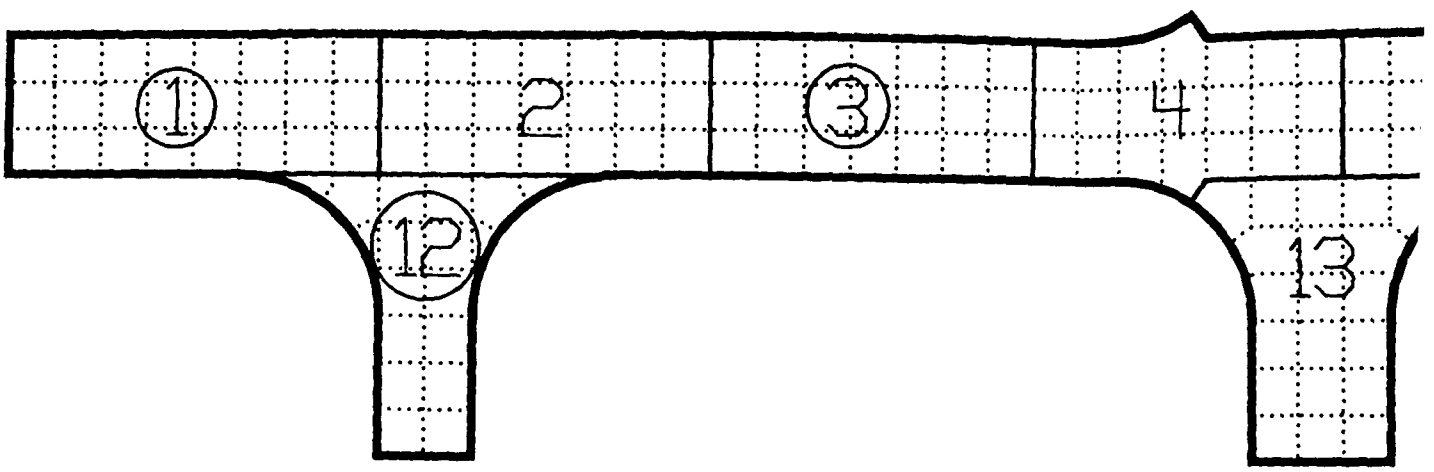
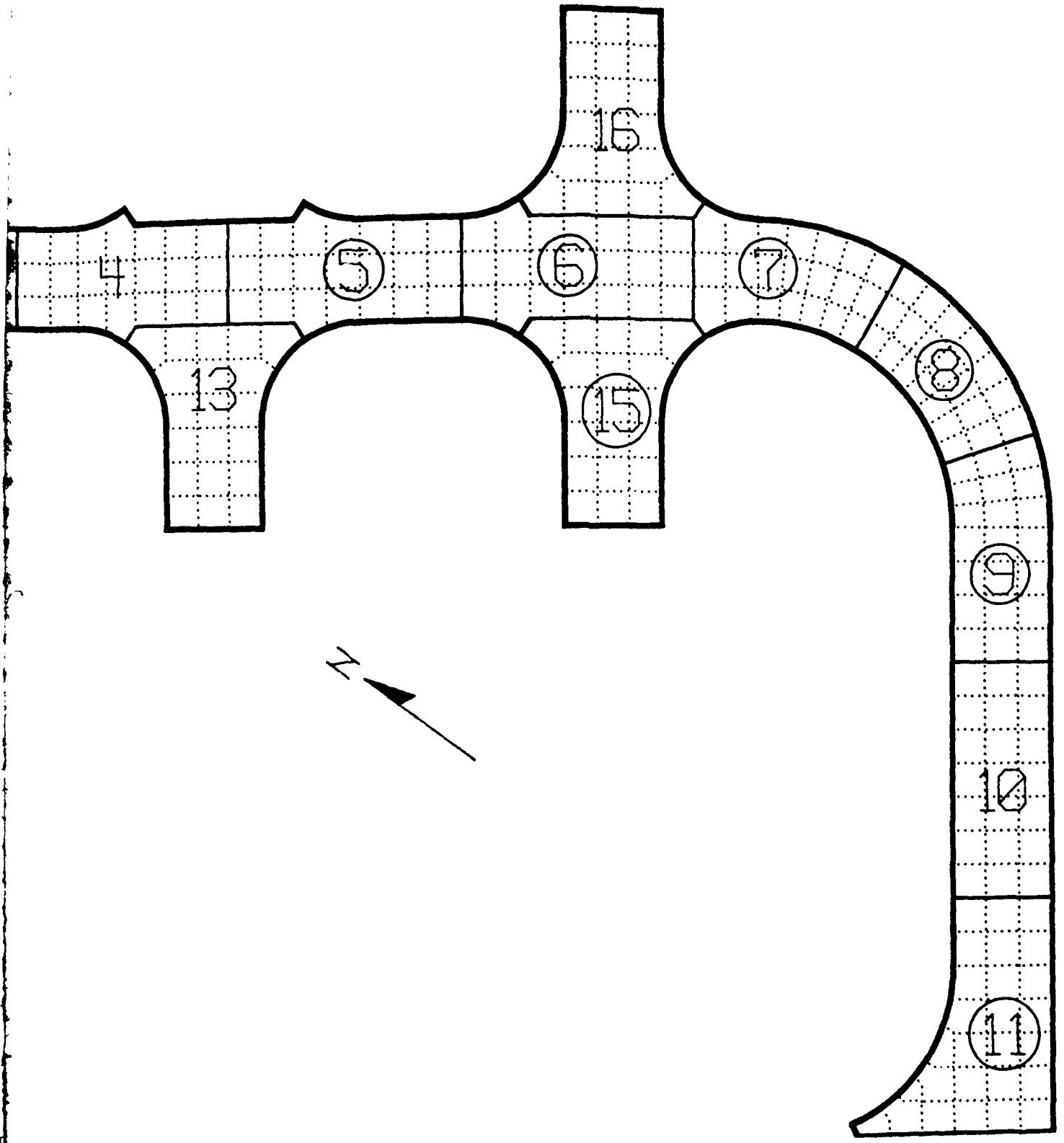


Figure 34. Sample unit layout, nose dock taxiwa



layout, nose dock taxiway and entrances (feature T23B)

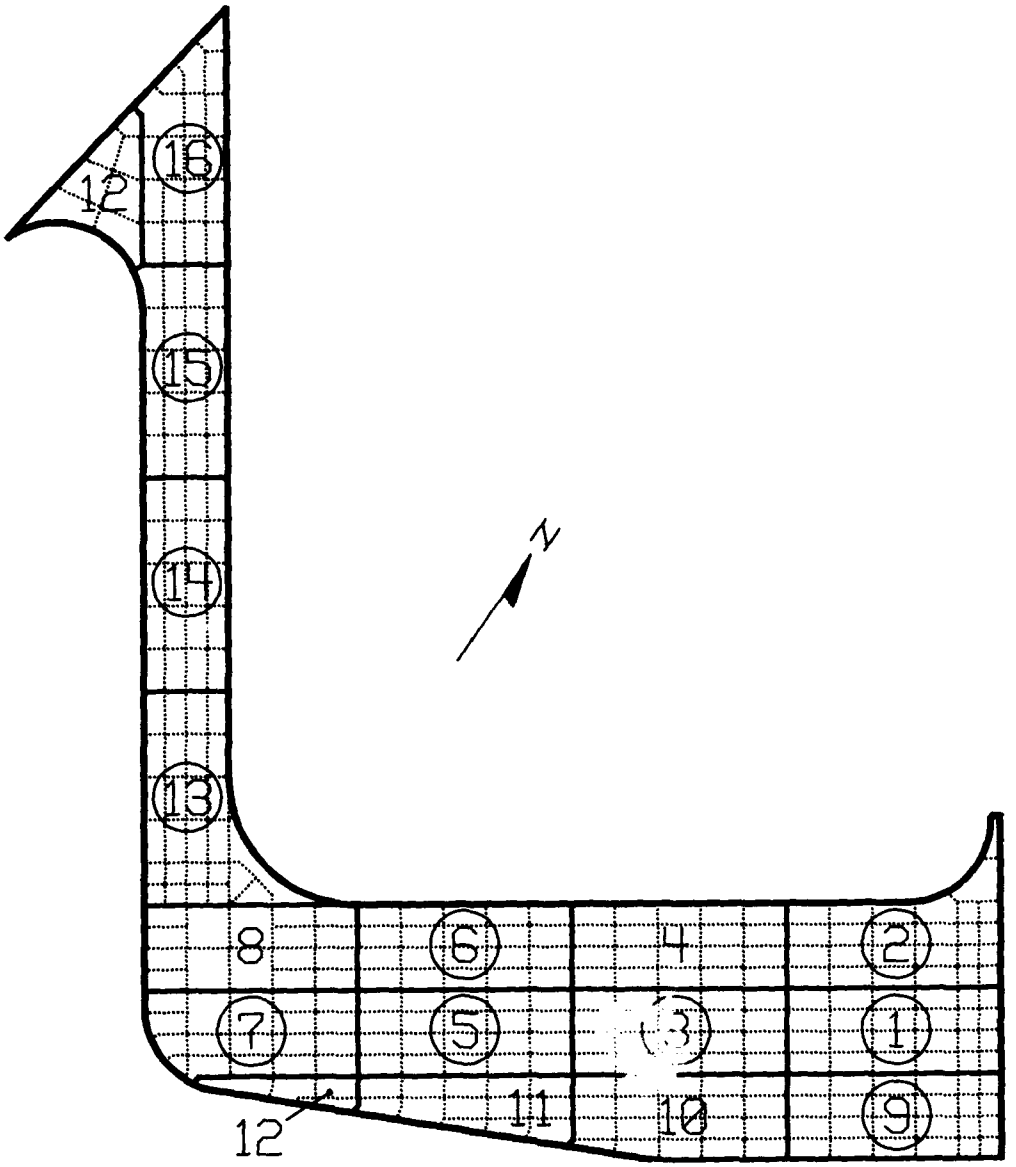


Figure 35. Sample unit layout, Taxiway 1C (feature T24B)

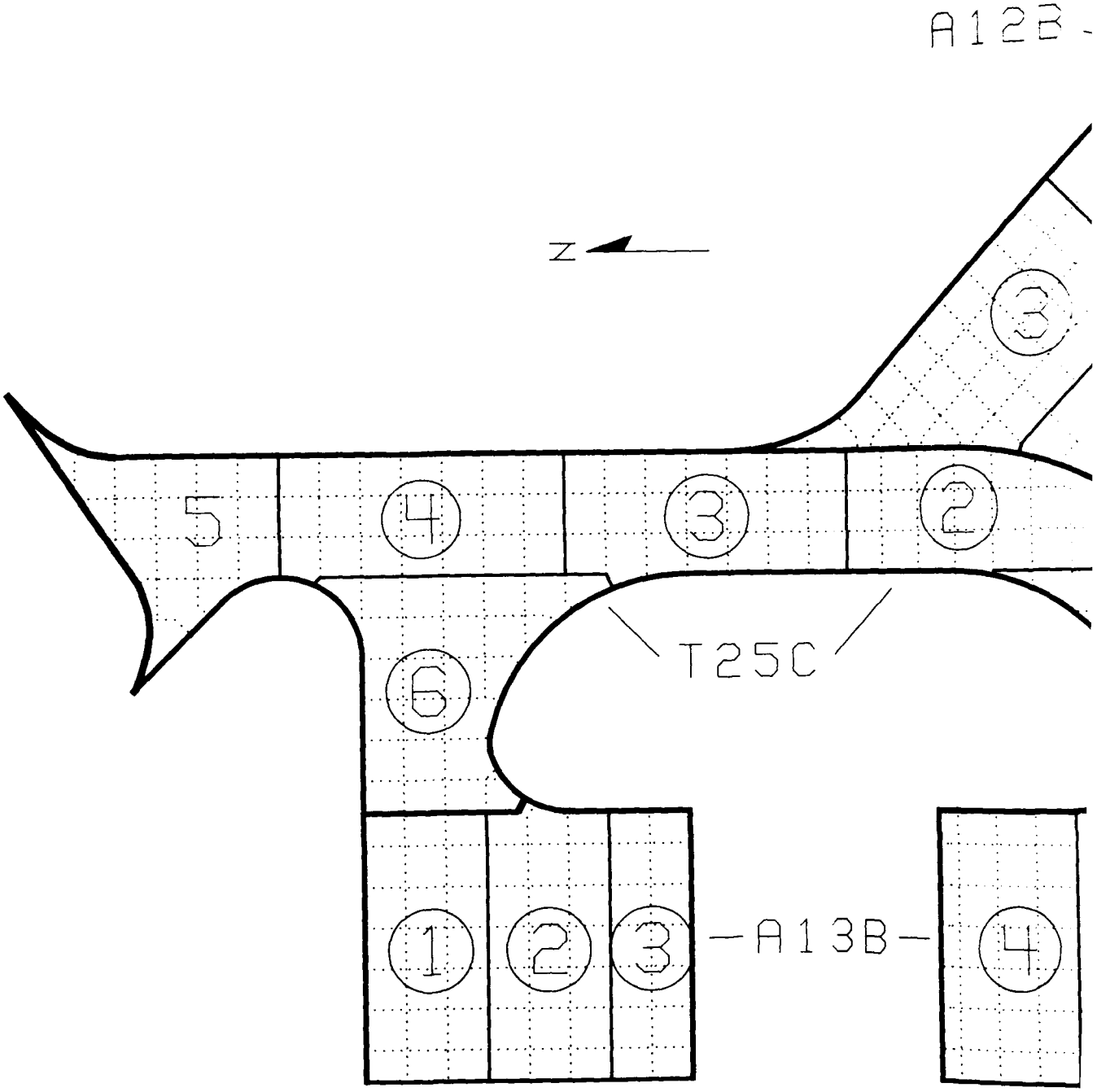
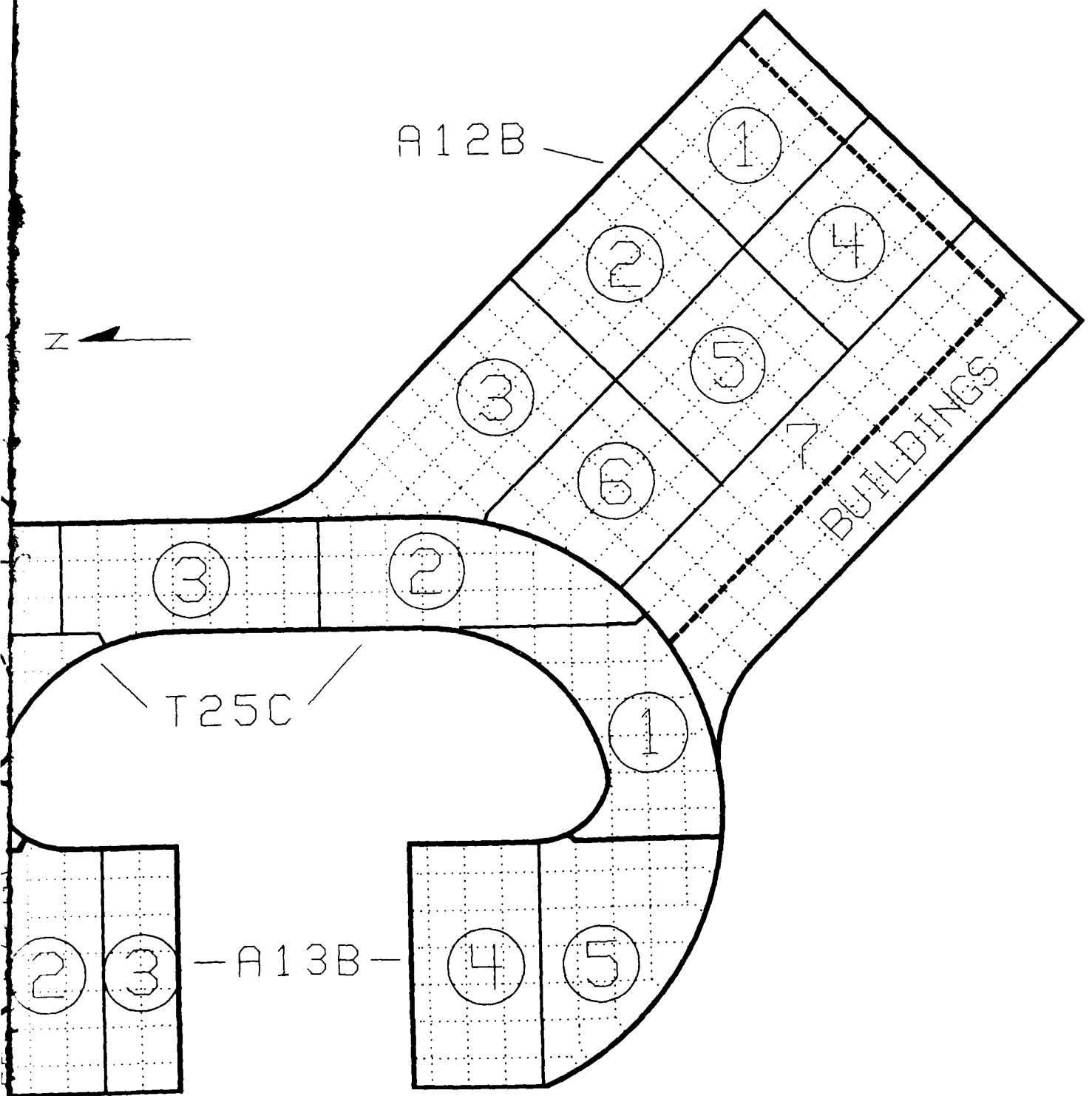


Figure 36. Sample unit layout, building 149 access taxiway (feature T25C), (feature A12B), and building 149 access apron (featu



it layout, building 149 access taxiway (feature T25C), building 149 operational apron (feature A12B), and building 149 access apron (feature A13B)

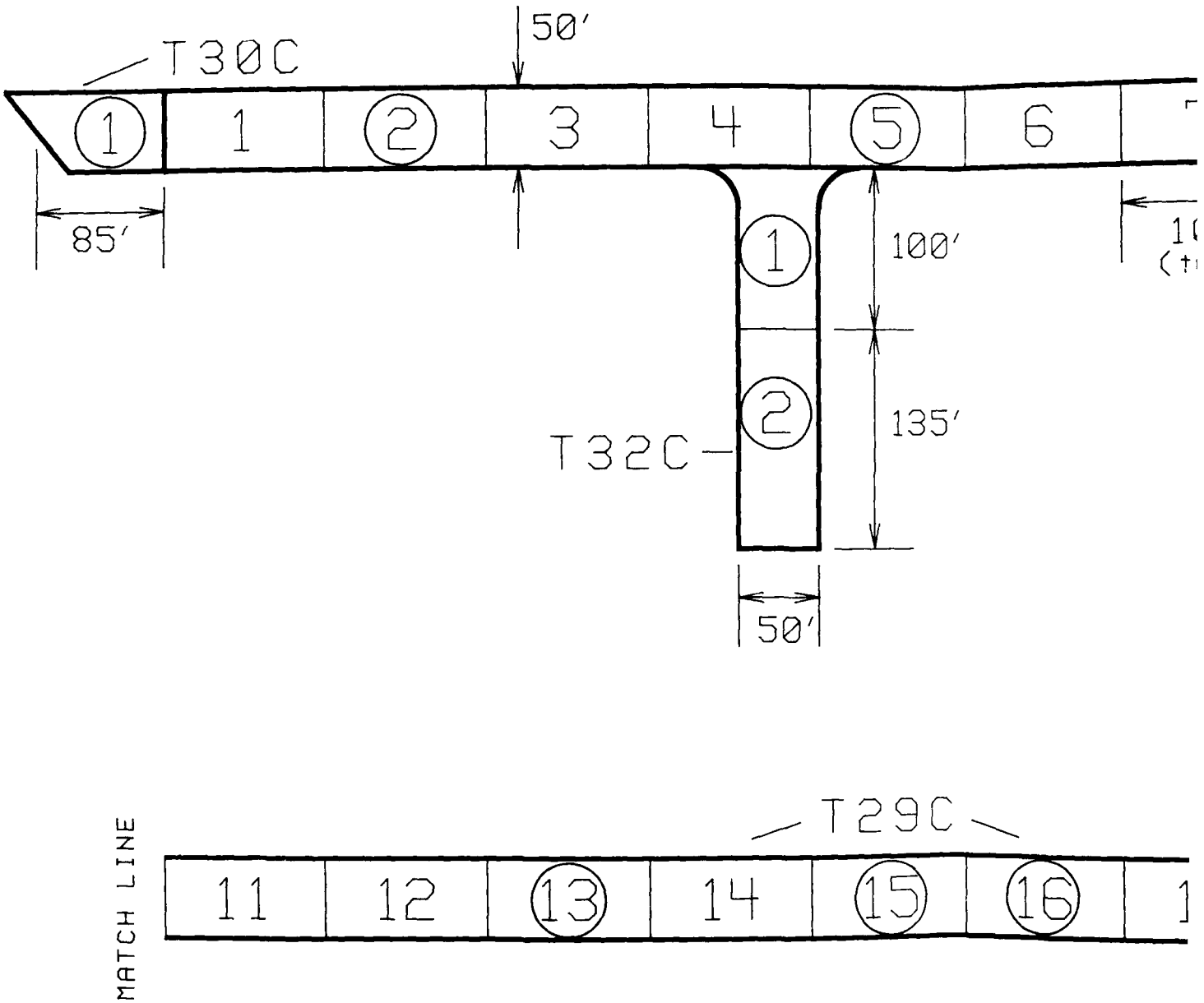
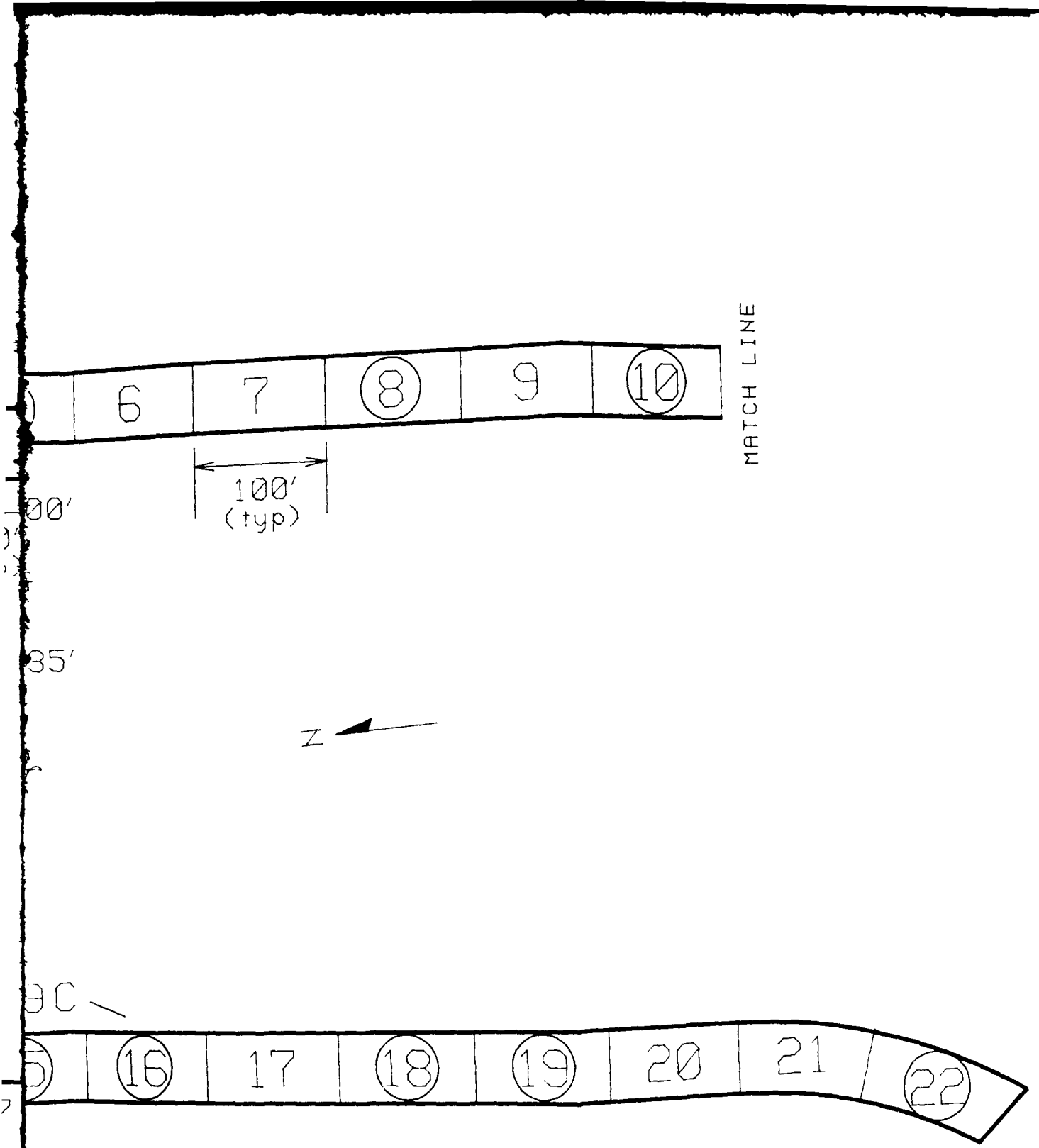


Figure 37. Sample unit layout, Taxiway 3B (features T29C and T30



B (features T29C and T30C) and taxiway to building 45 (feature T32C)

an

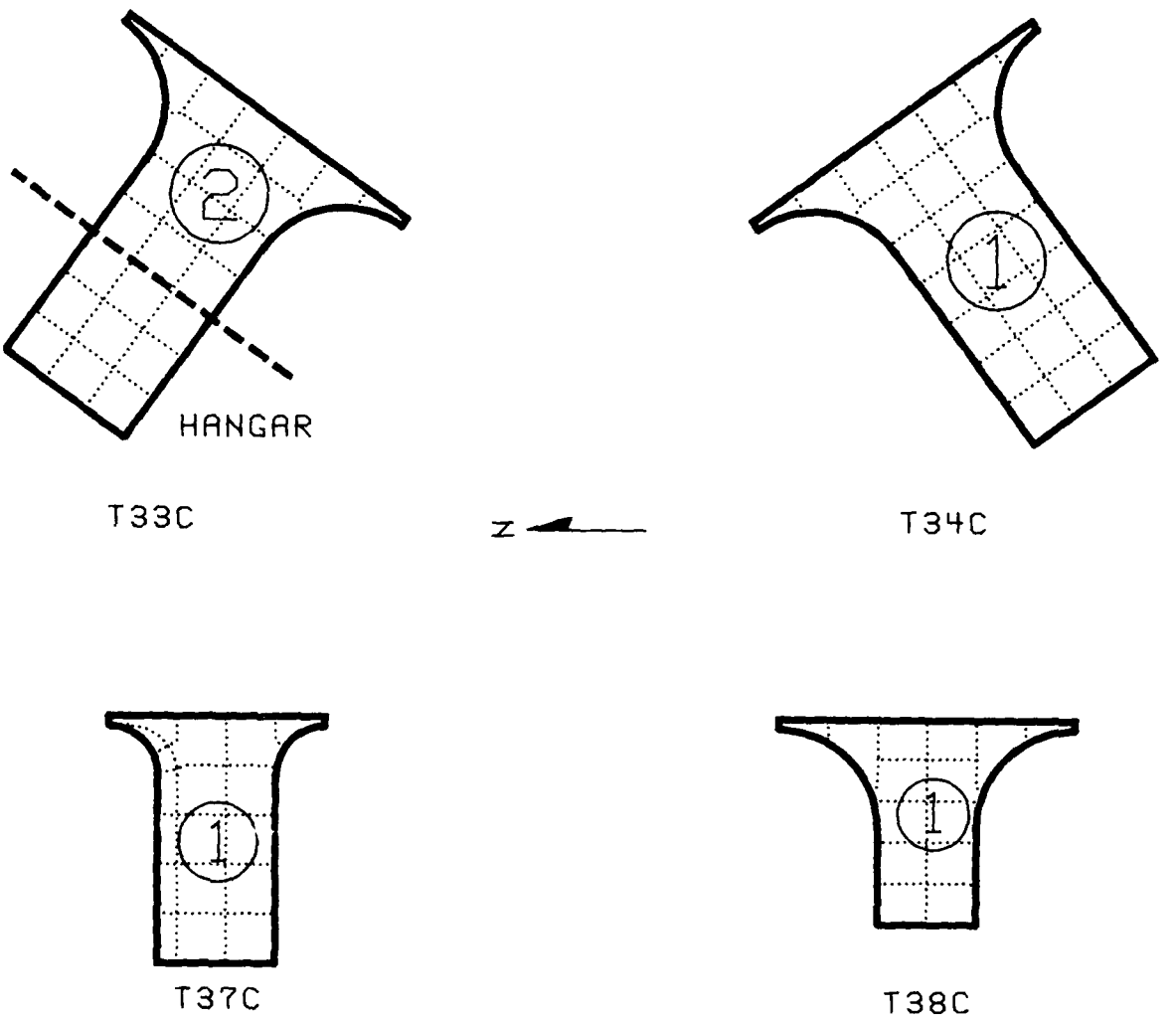


Figure 38. Sample unit layout, taxiways to building 44 (feature T33C), building 55 (feature T34C), building 54 (feature T37C), and building 89 (feature T38C)

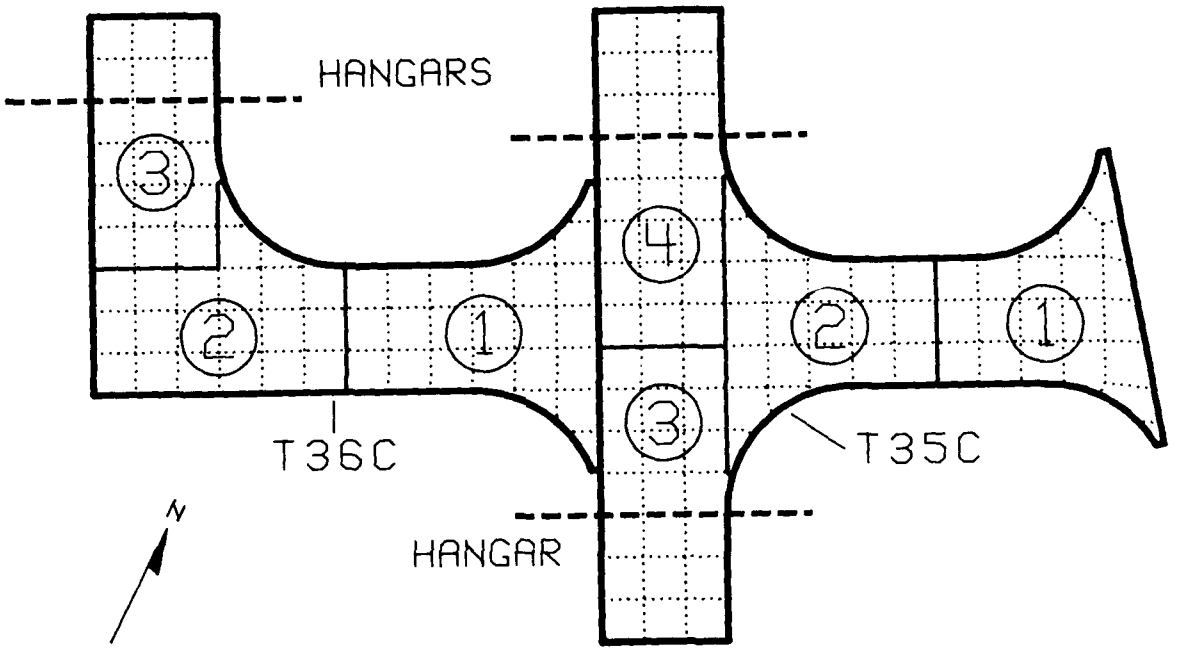


Figure 39. Sample unit layout, taxiways to buildings 48 and 49 (feature T35C) and taxiway to building 47 (feature T36C)

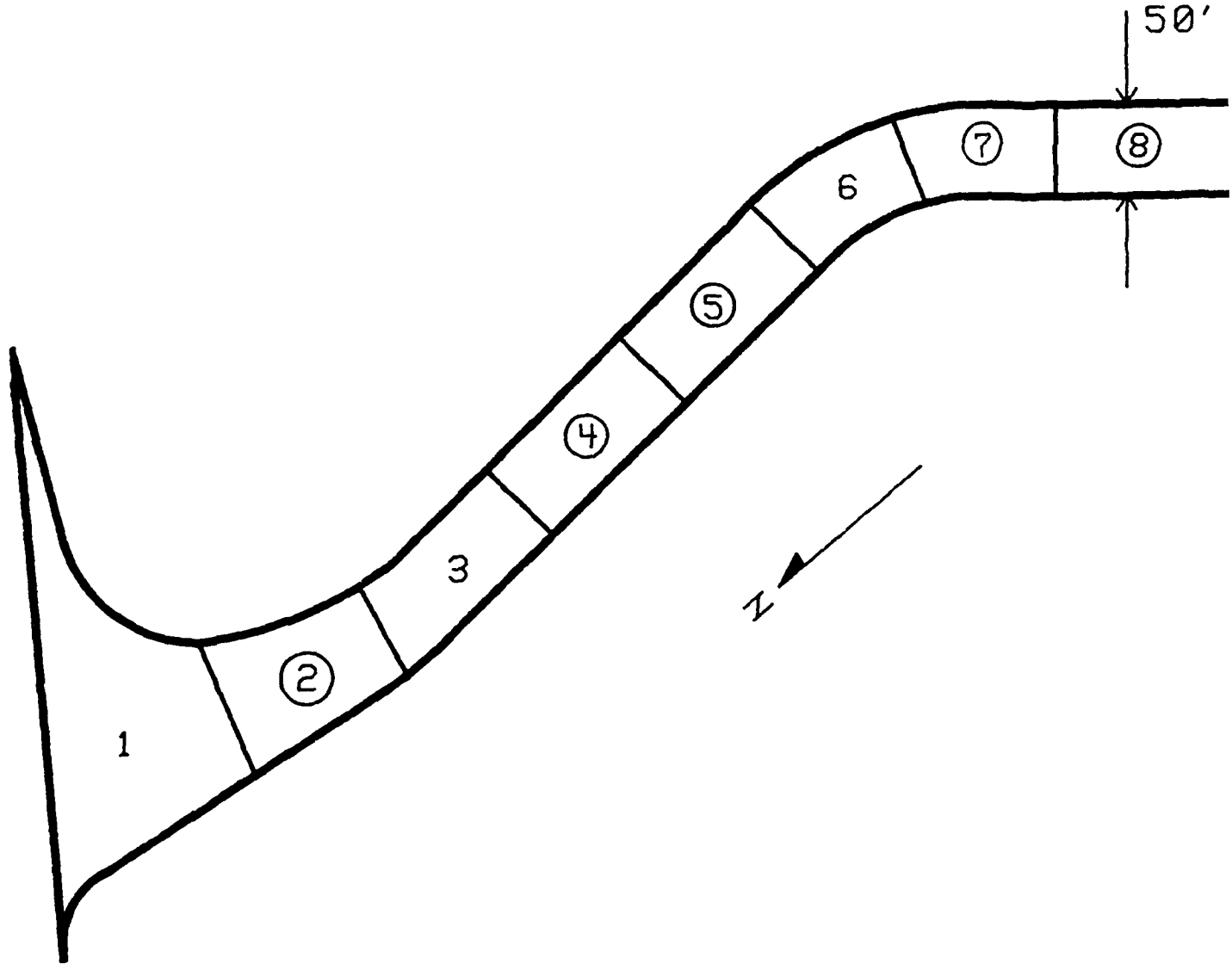
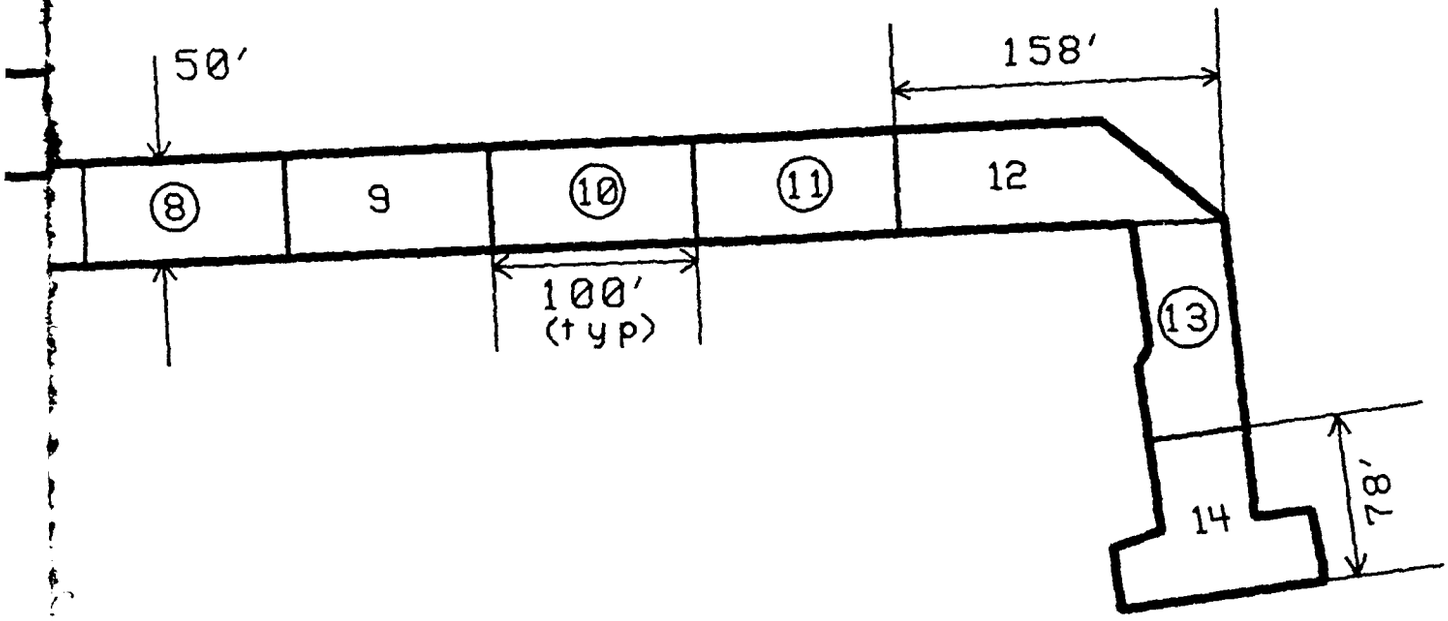


Figure 40. Sample unit layo



Sample unit layout, Taxiway 3D (feature T39C)

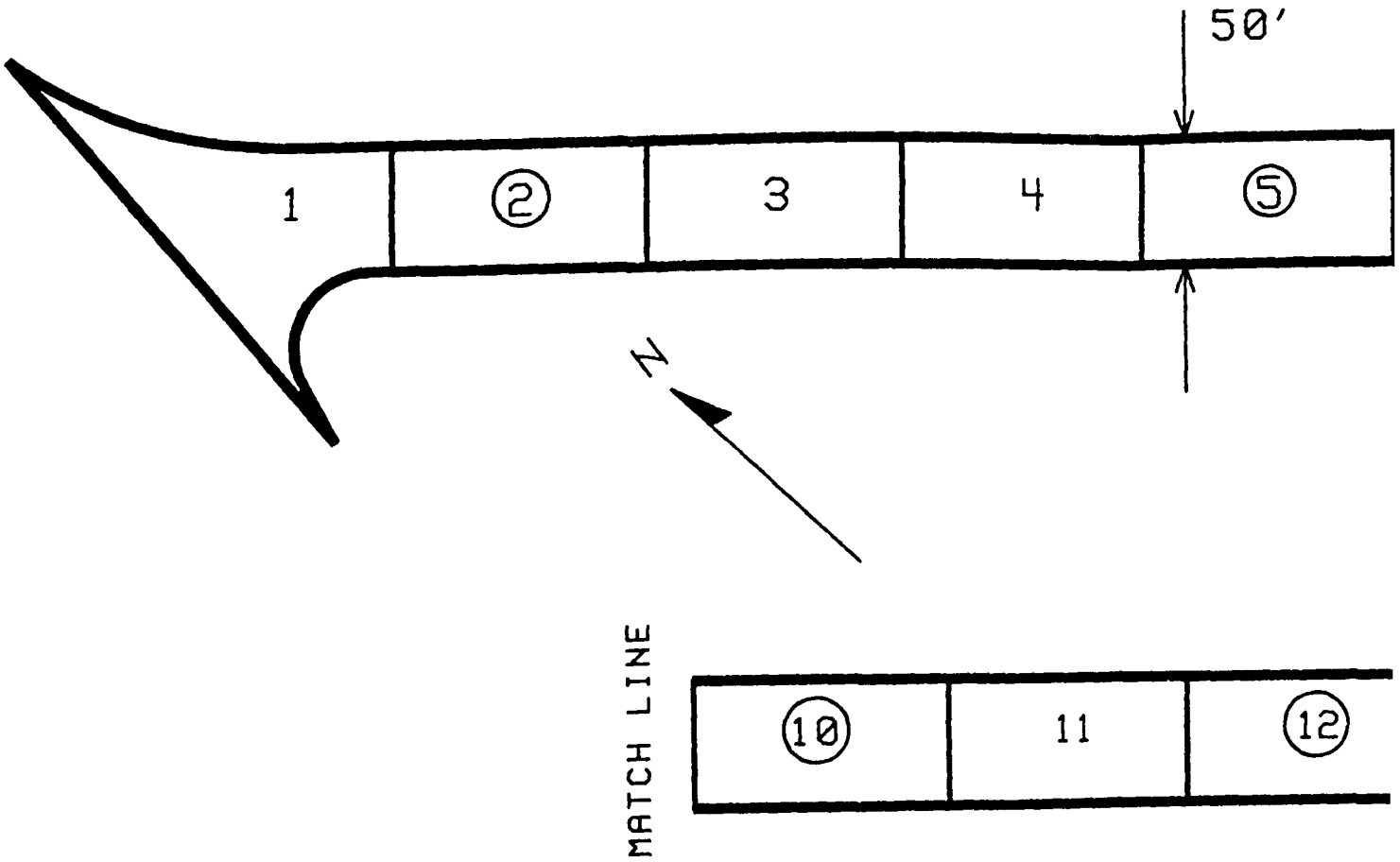
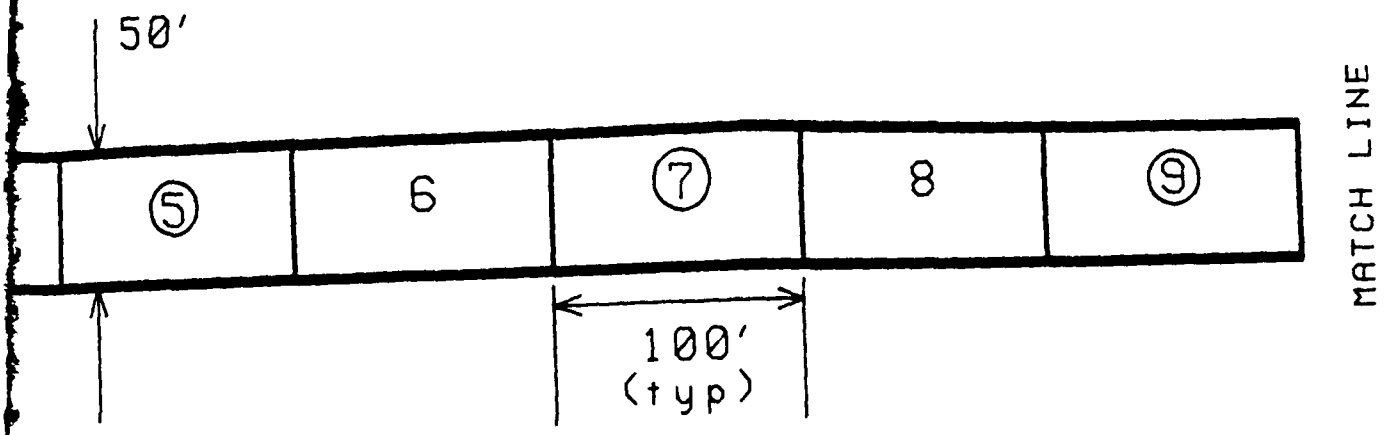
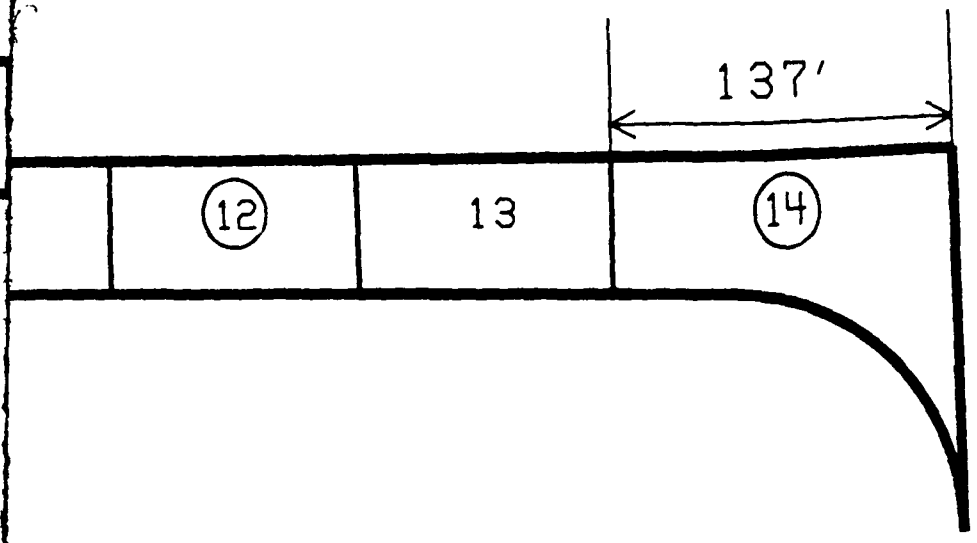


Figure 41. Sample unit layout, Taxiw





ble unit layout, Taxiway 3C (feature T40C)

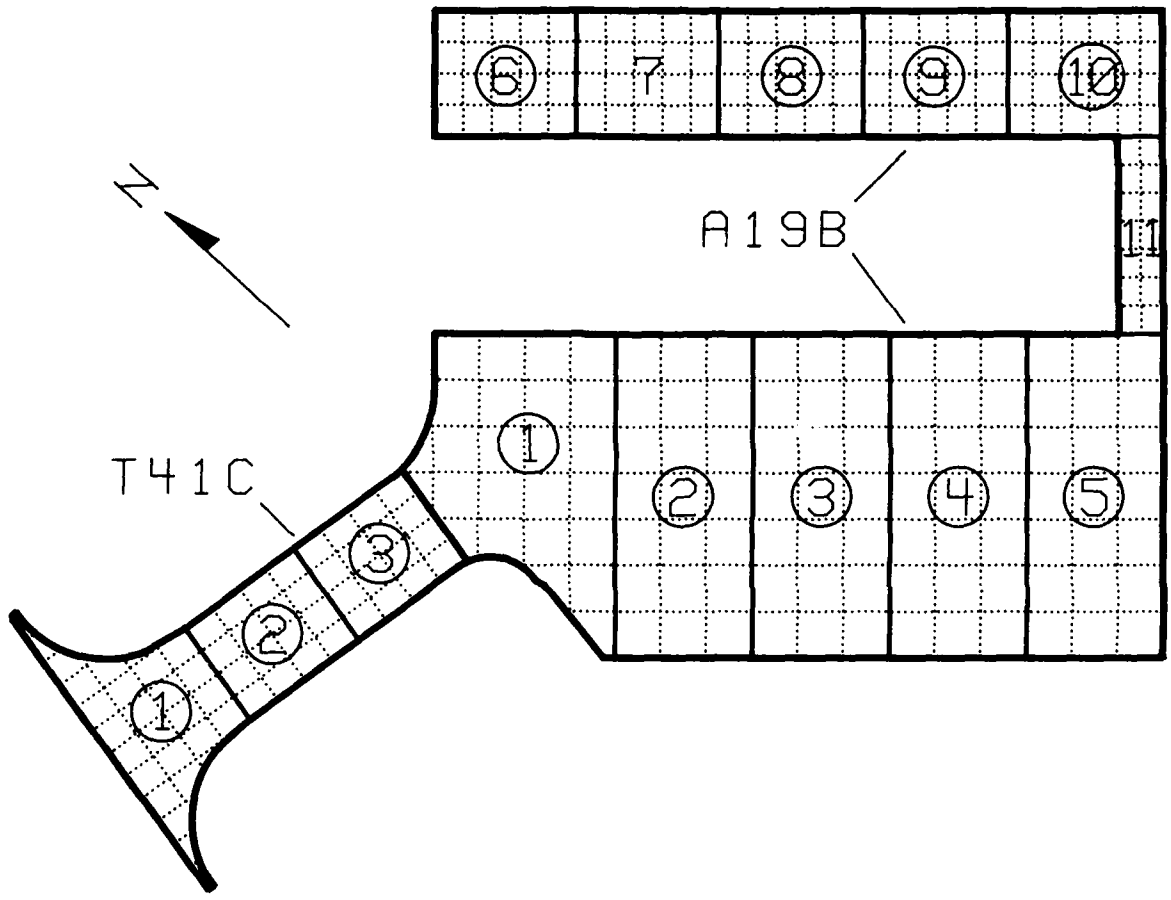


Figure 42. Sample unit layout, F-15 maintenance apron (feature A19B) and taxiway (feature T41C)

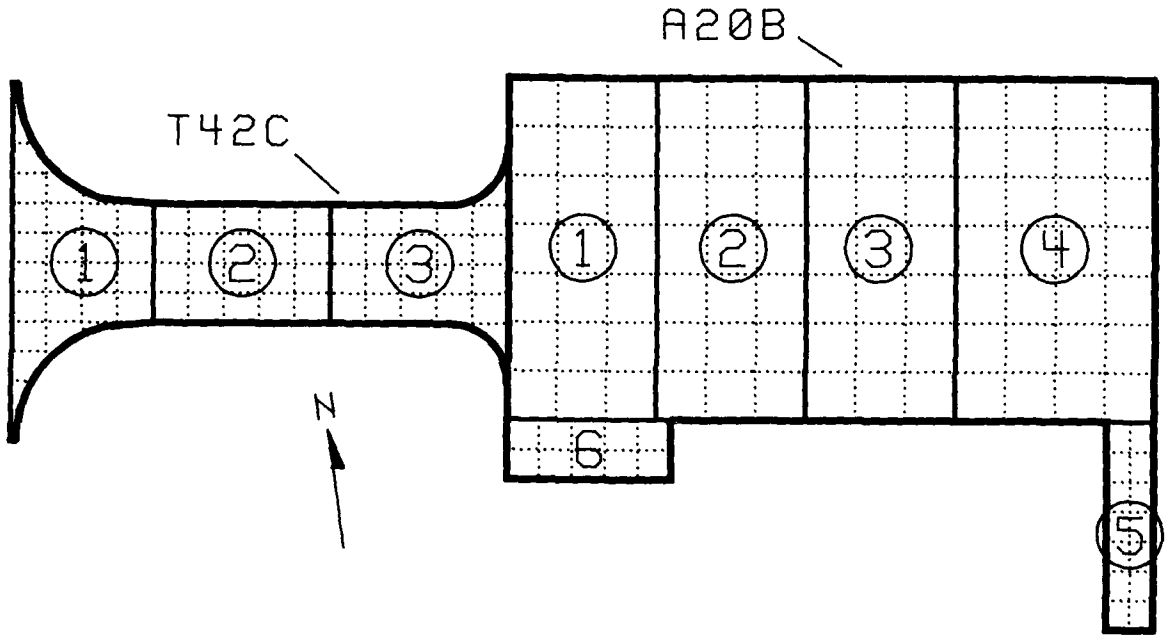


Figure 43. Sample unit layout, F-15 maintenance apron (feature A20B) and taxiway (feature T42C)

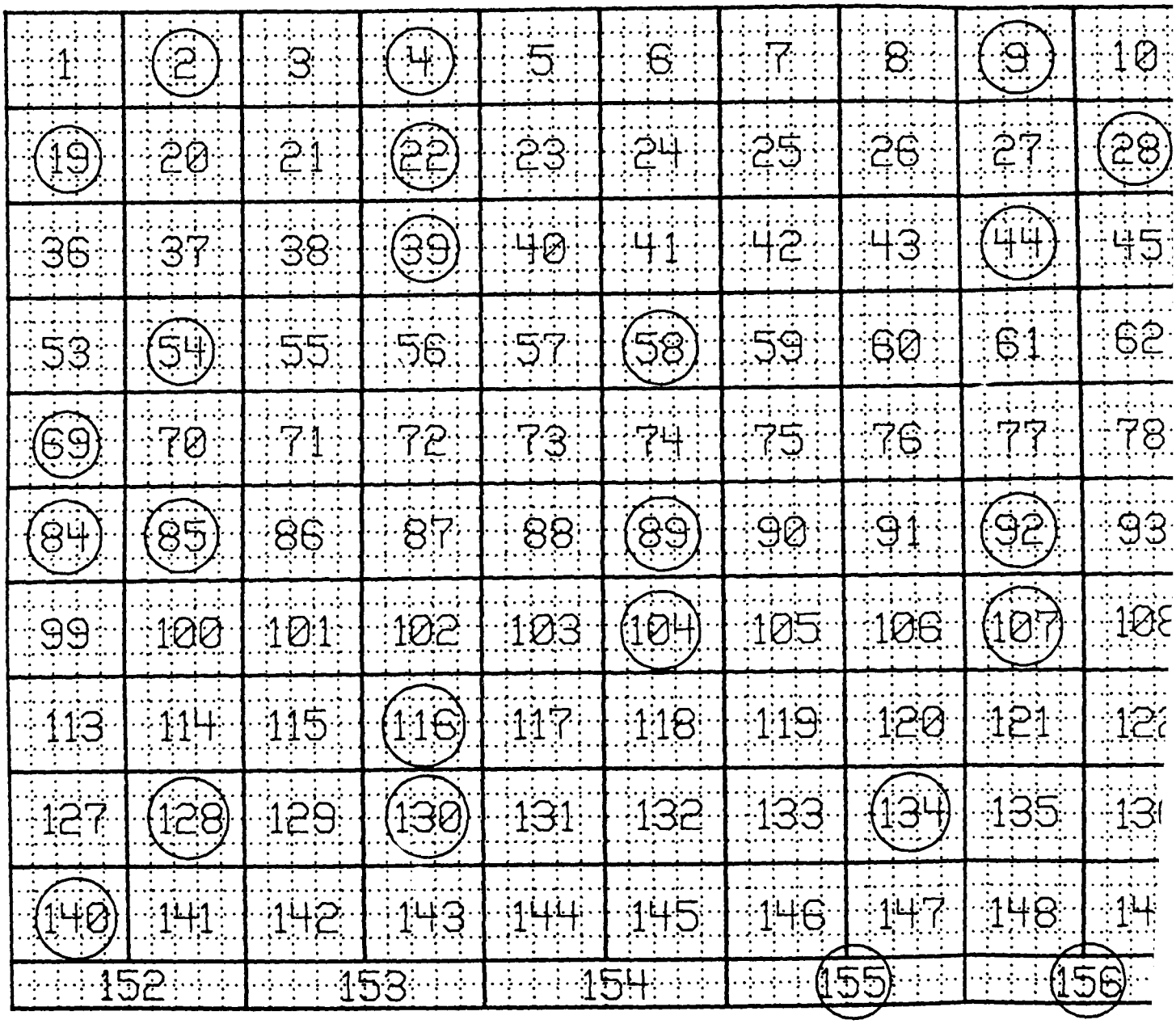
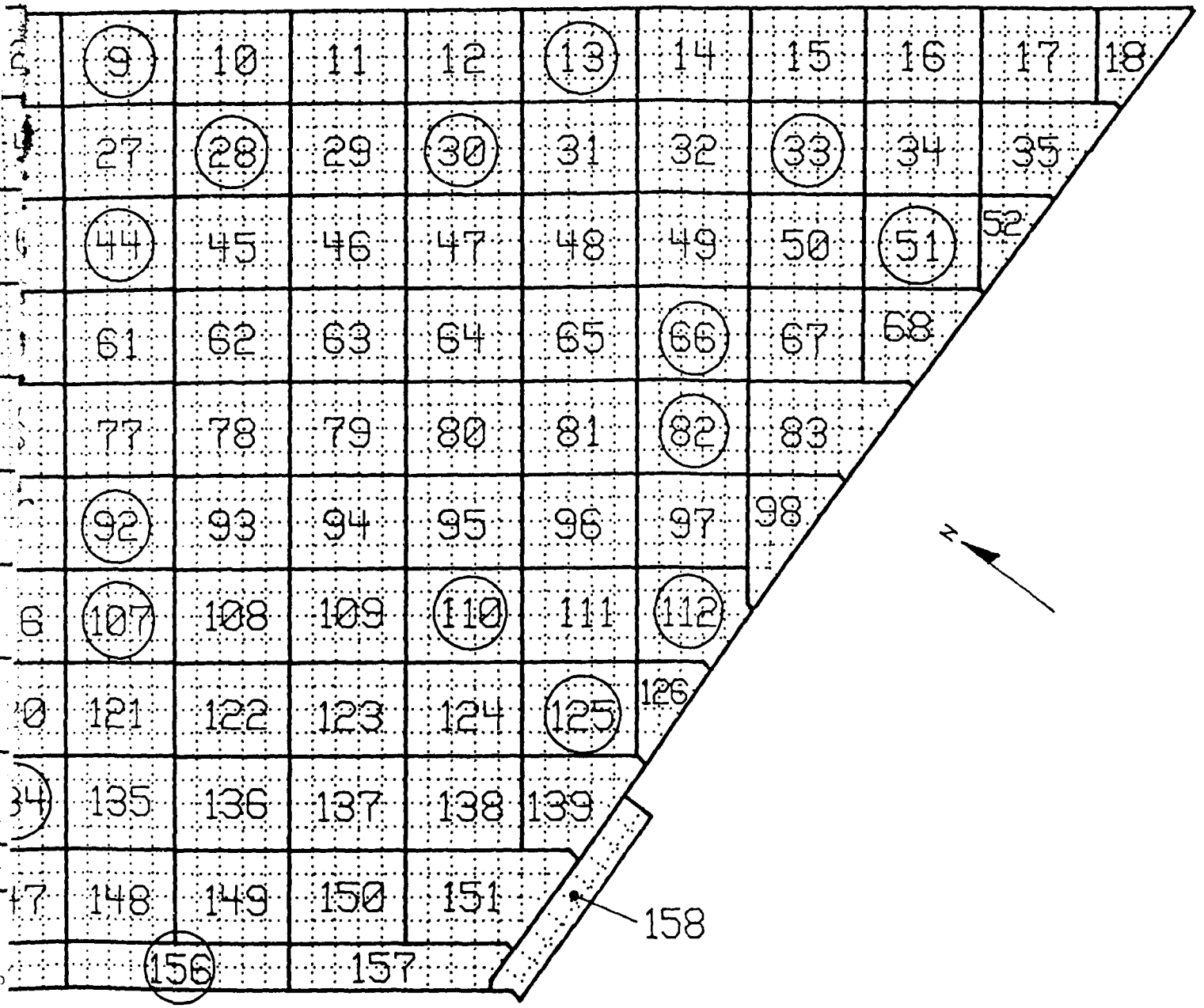
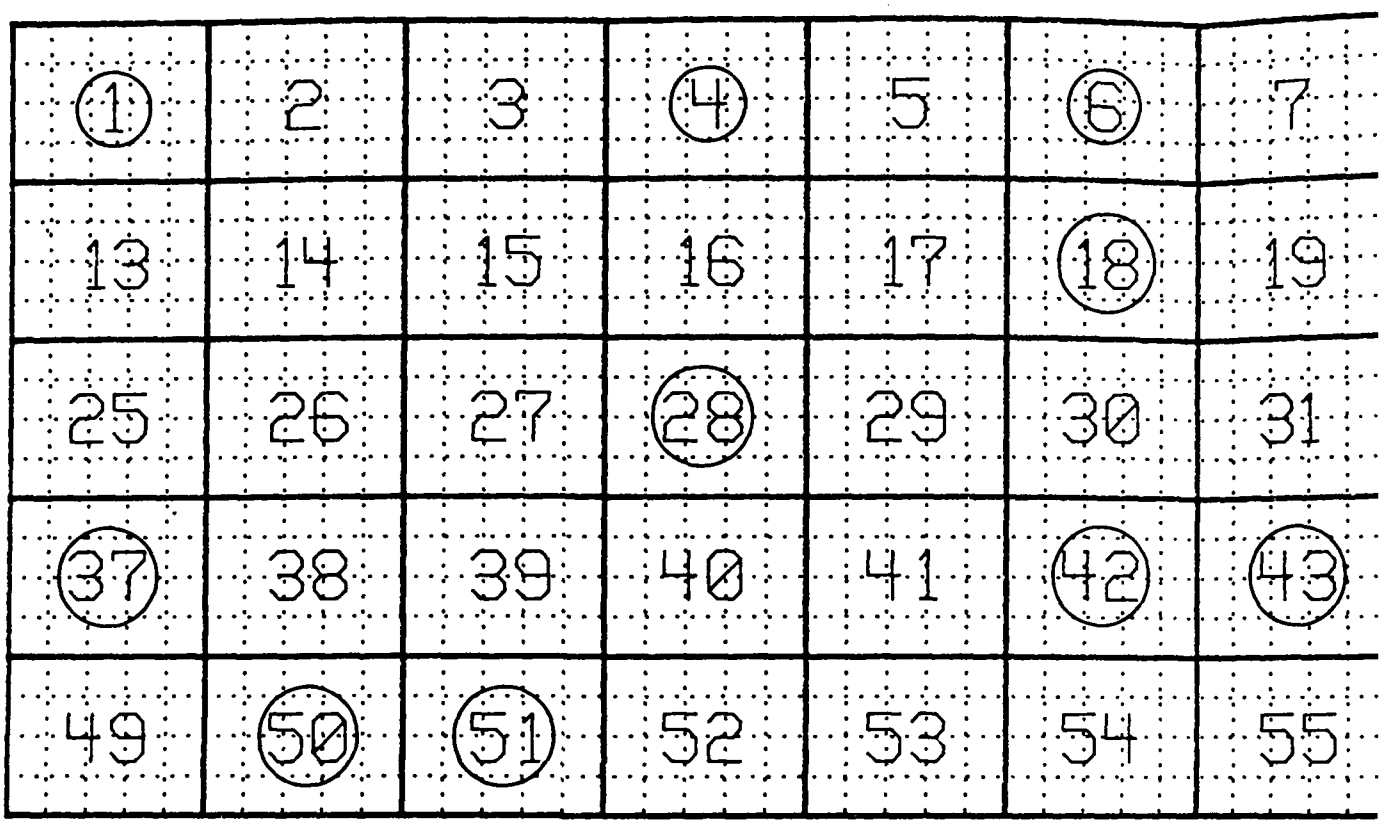


Figure 44. Sample unit layout, no



mple unit layout, north apron (feature A4B)



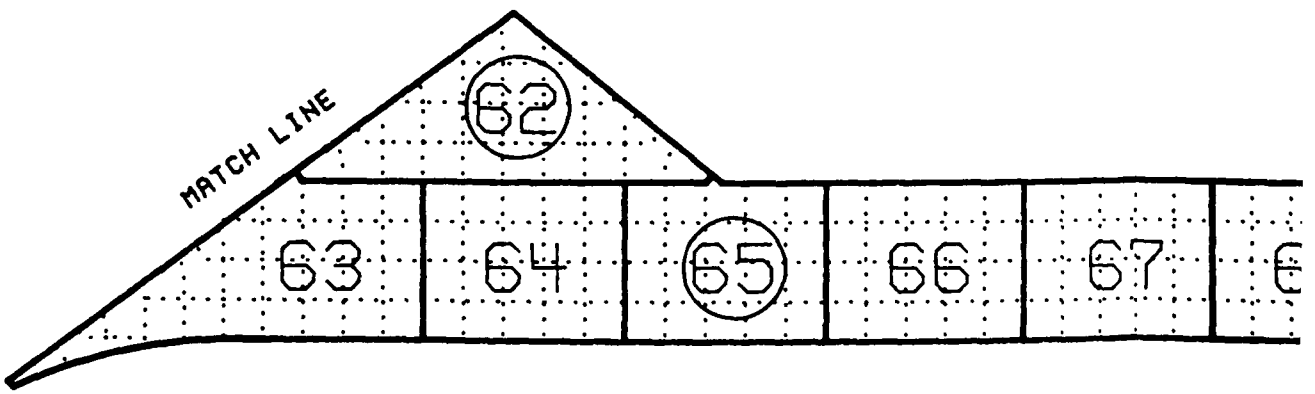
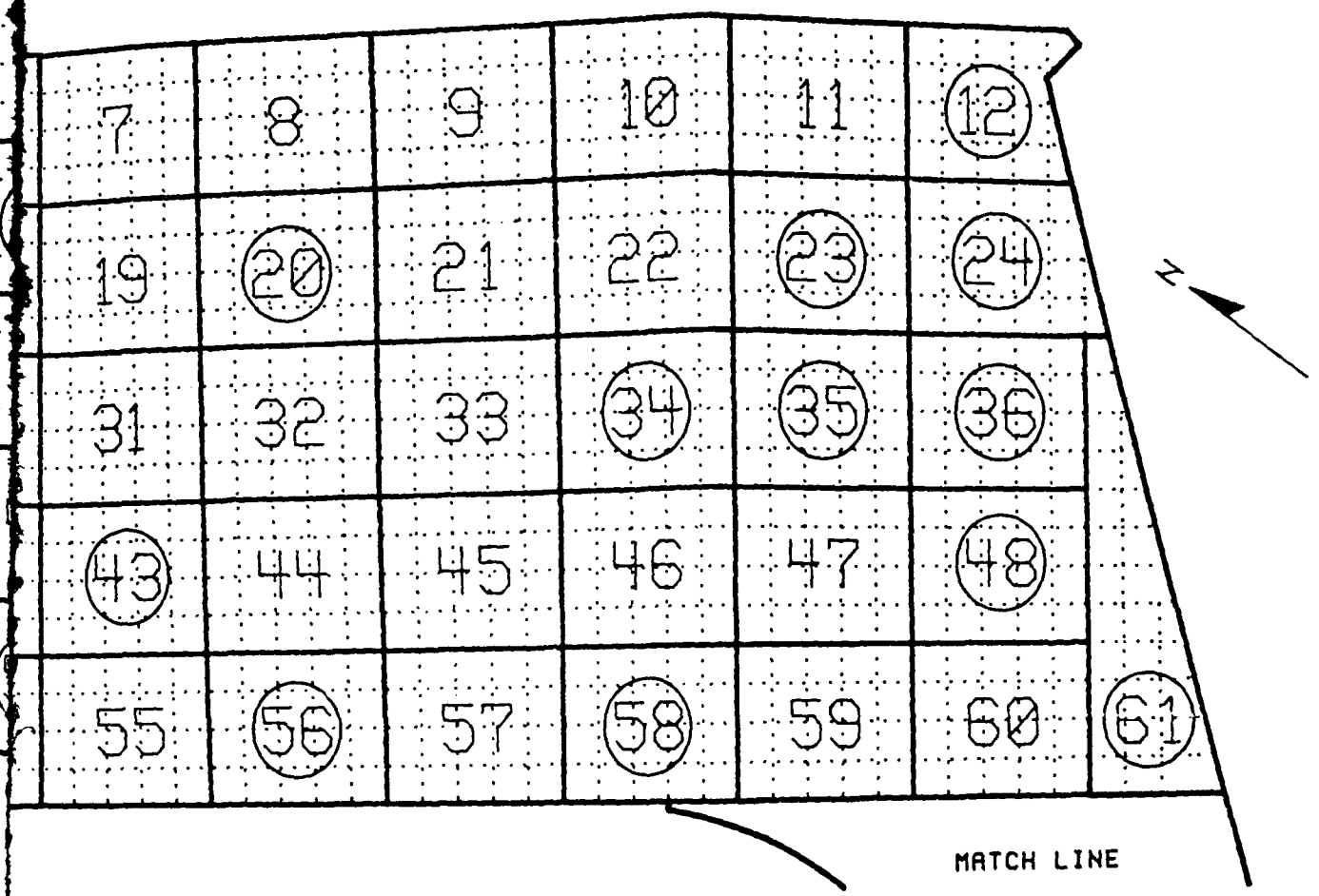
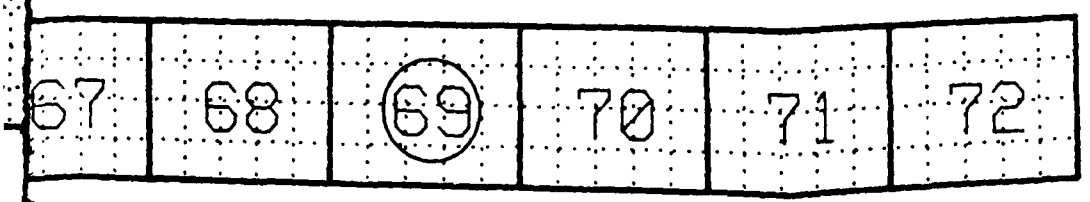


Figure 45. Sample unit layout, nor





nit layout, northwest apron (feature A5B)

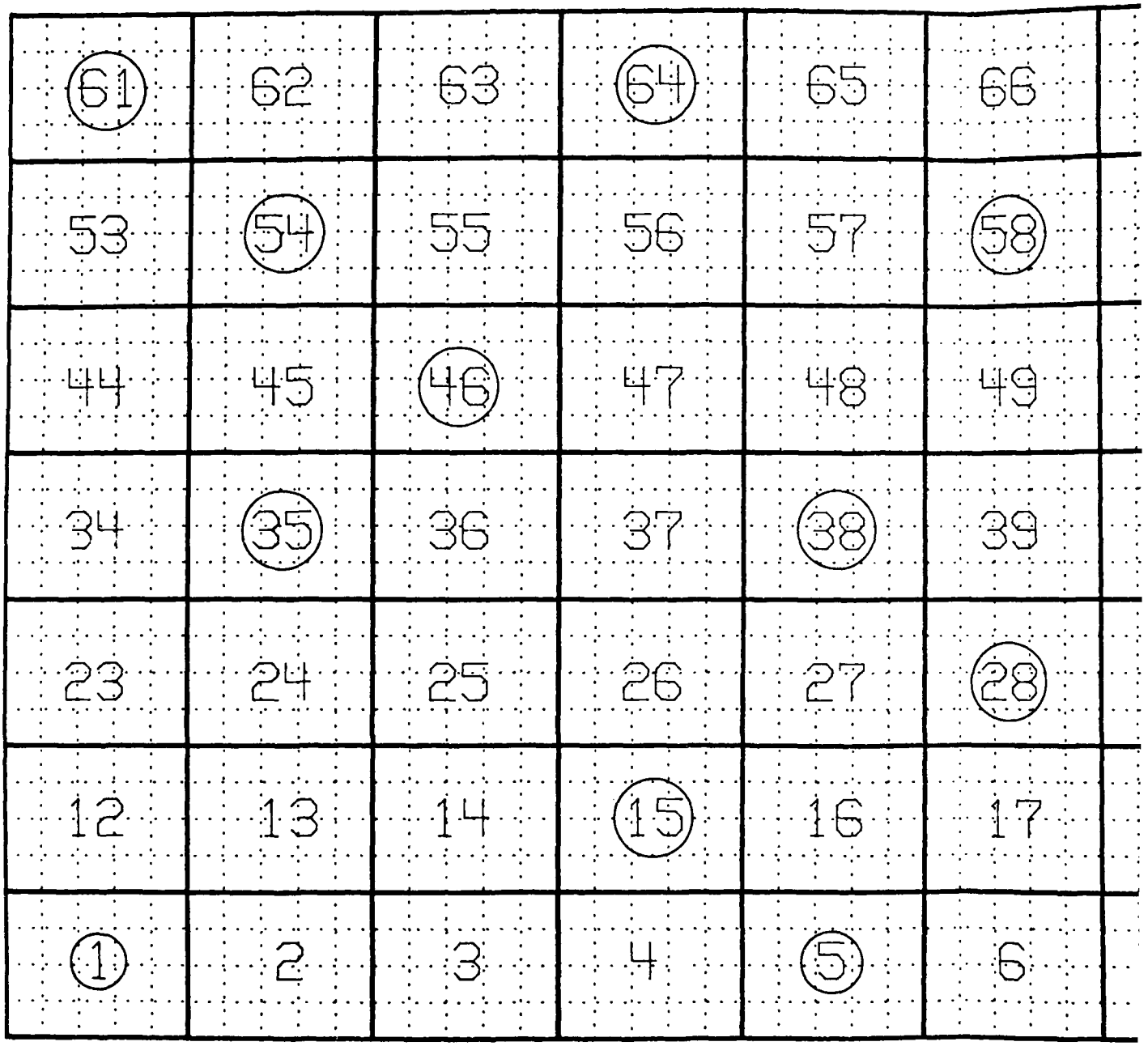
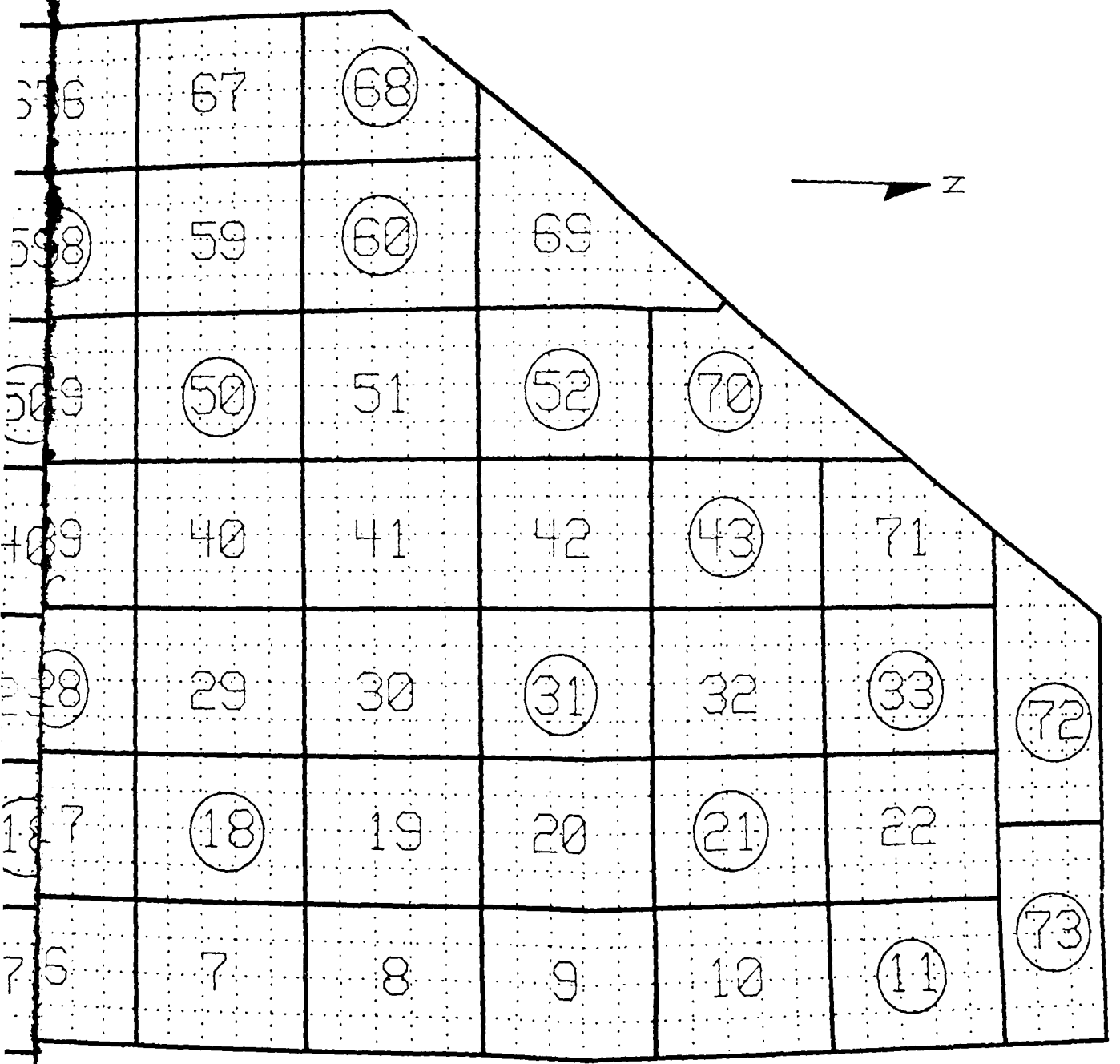


Figure 46. Sample unit layout, west



ayout, west apron (feature A6B)

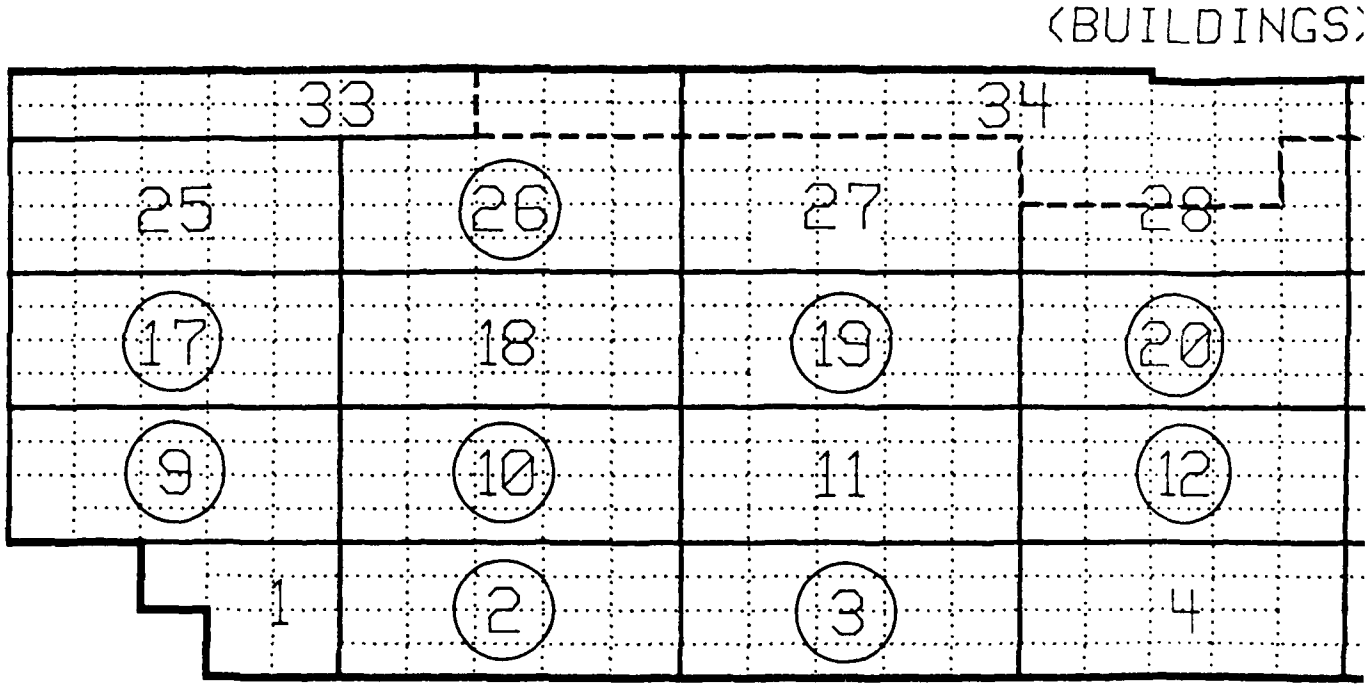
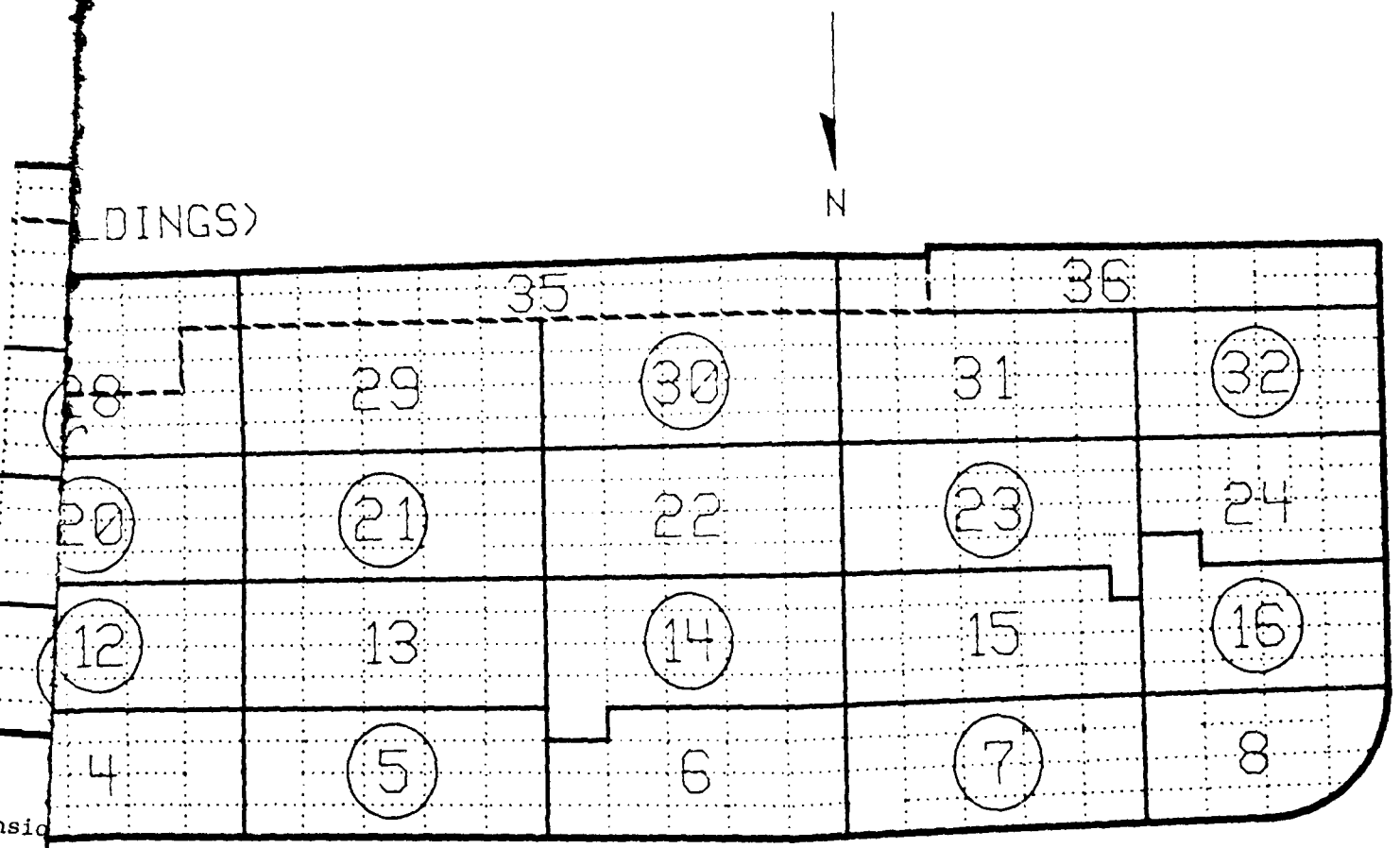


Figure 47. Sample unit layout, south



t layout, south extension apron (feature A11B)

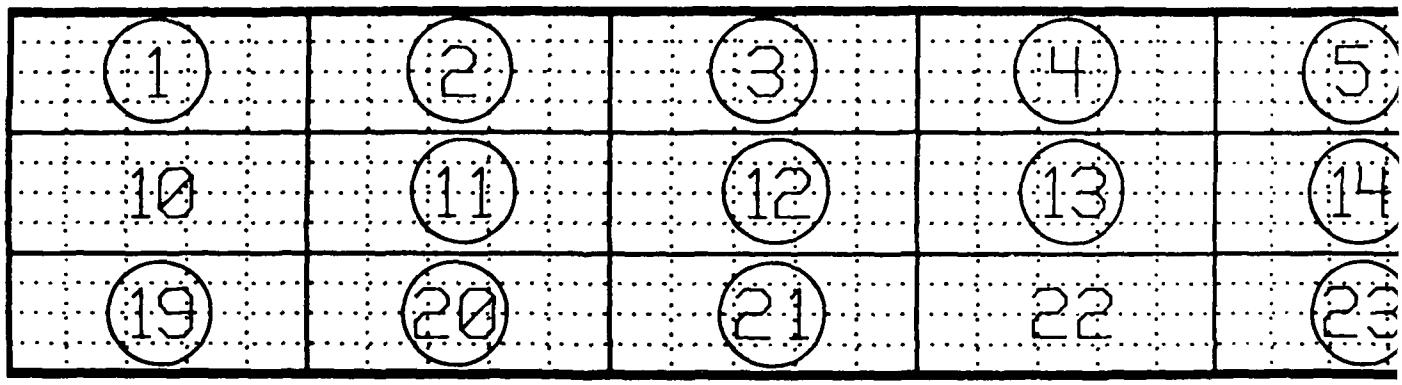
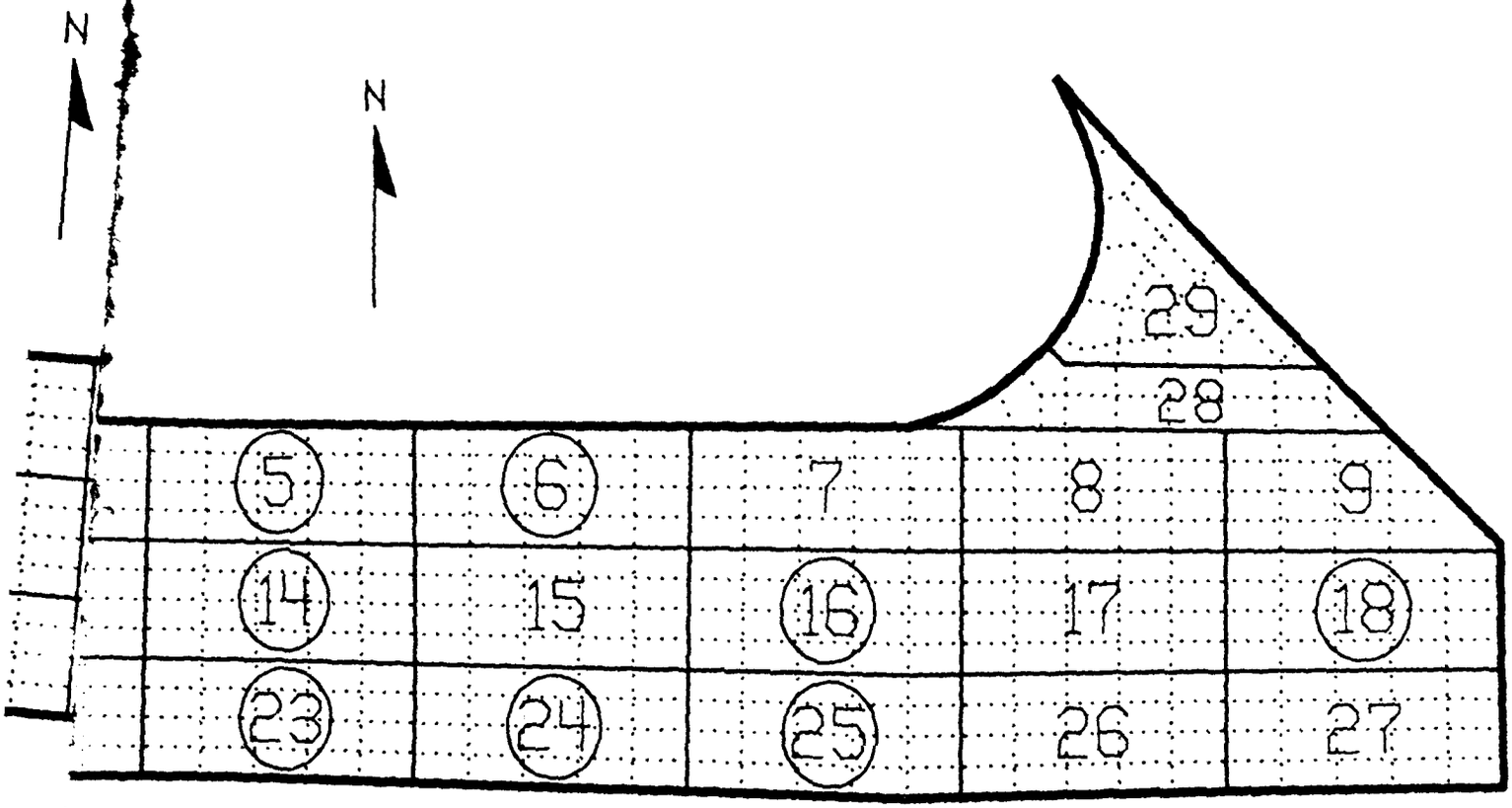


Figure 48. Sample unit layout, old E-W



way

it layout, old E-W runway used as an apron (feature A148)

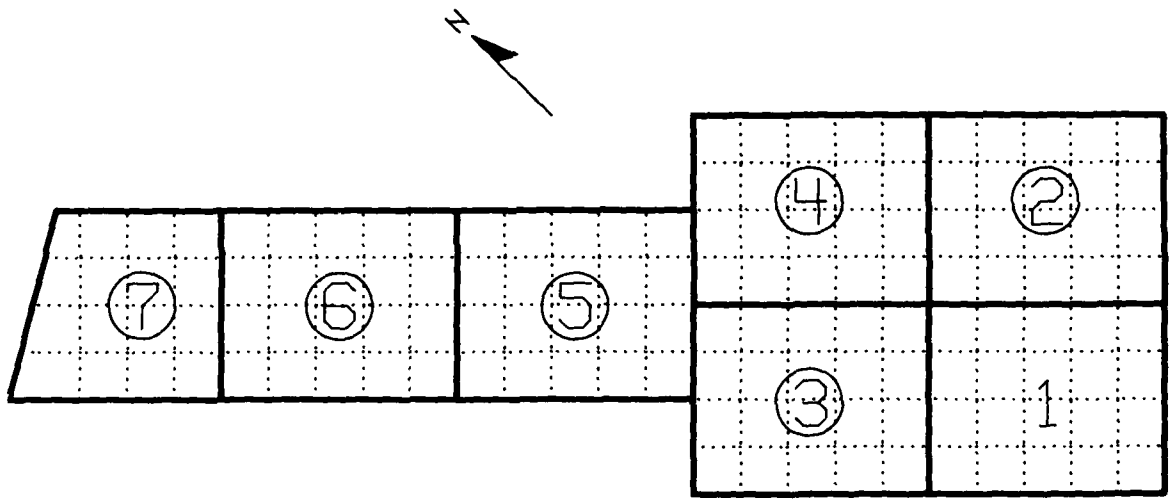


Figure 49. Sample unit layout, temporary power check pad (feature A15B)

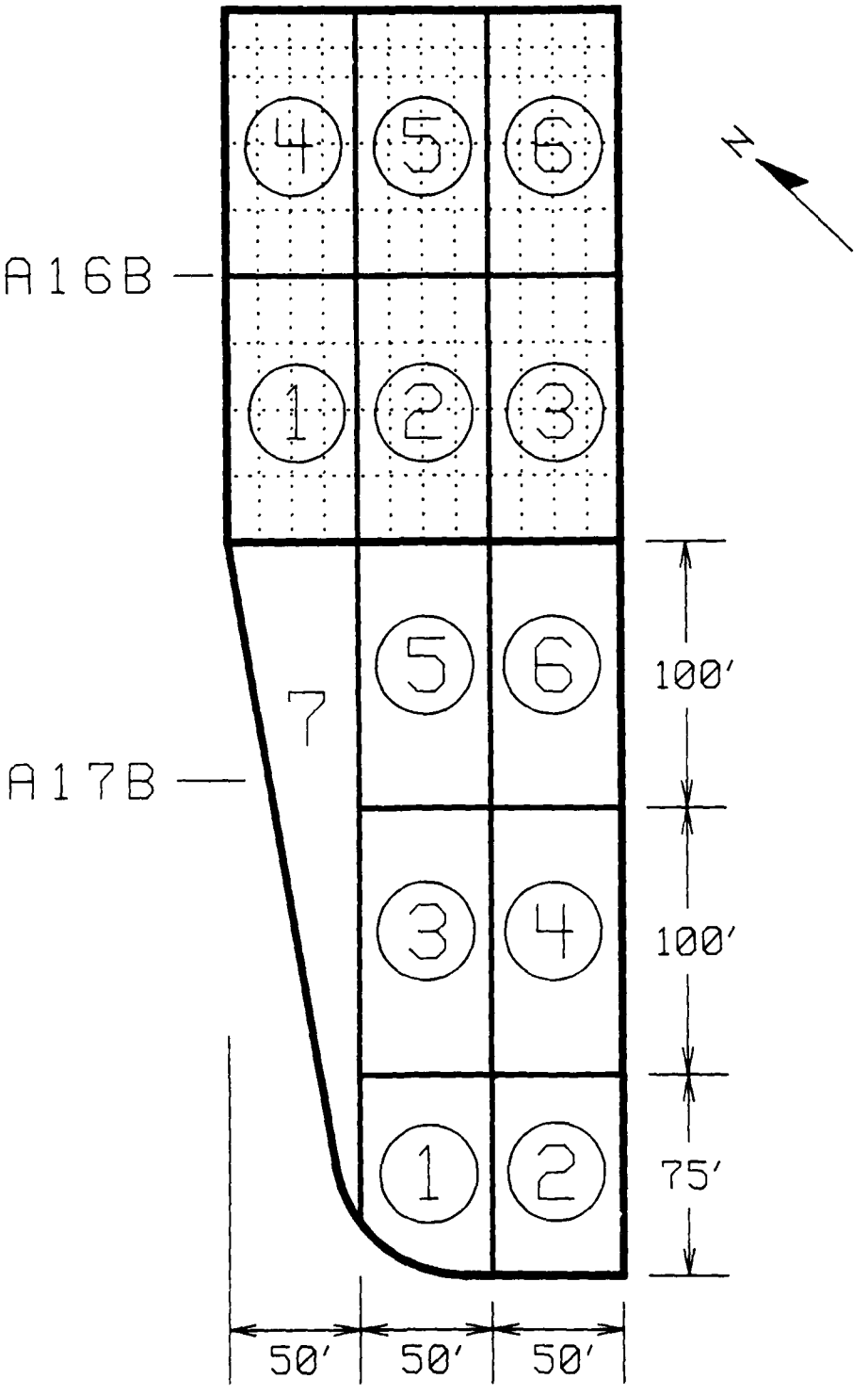


Figure 50. Sample unit layout, dangerous cargo pad (features A16B and A17B)

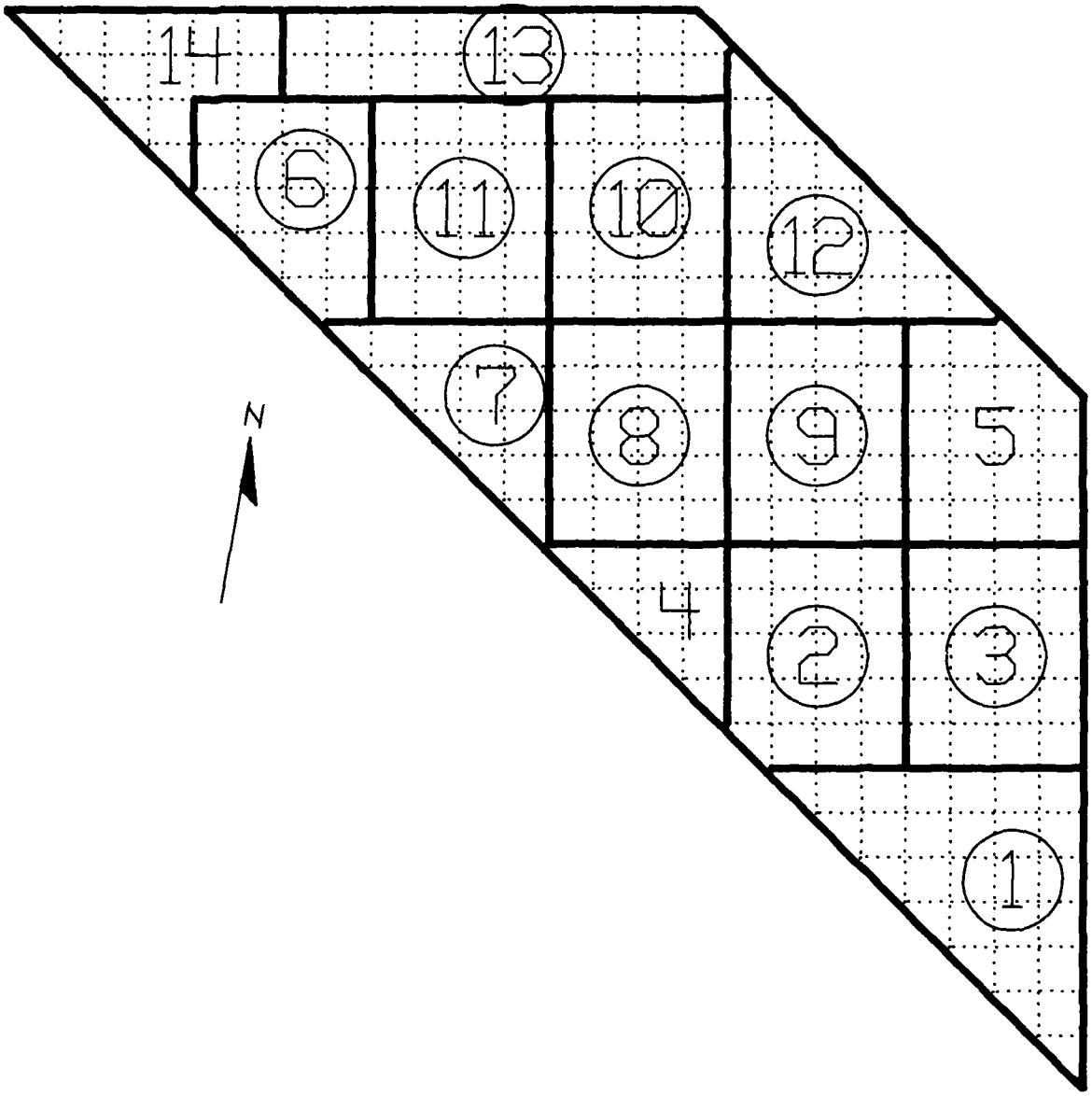


Figure 51. Sample unit layout, air freight extension apron (feature A18B)

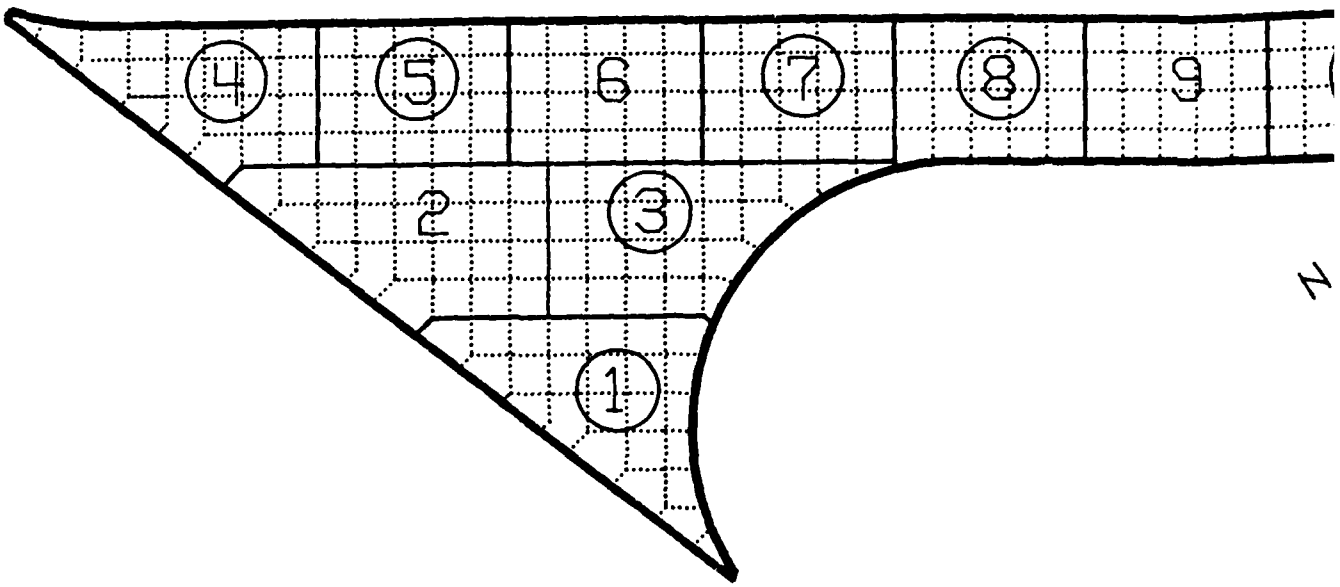
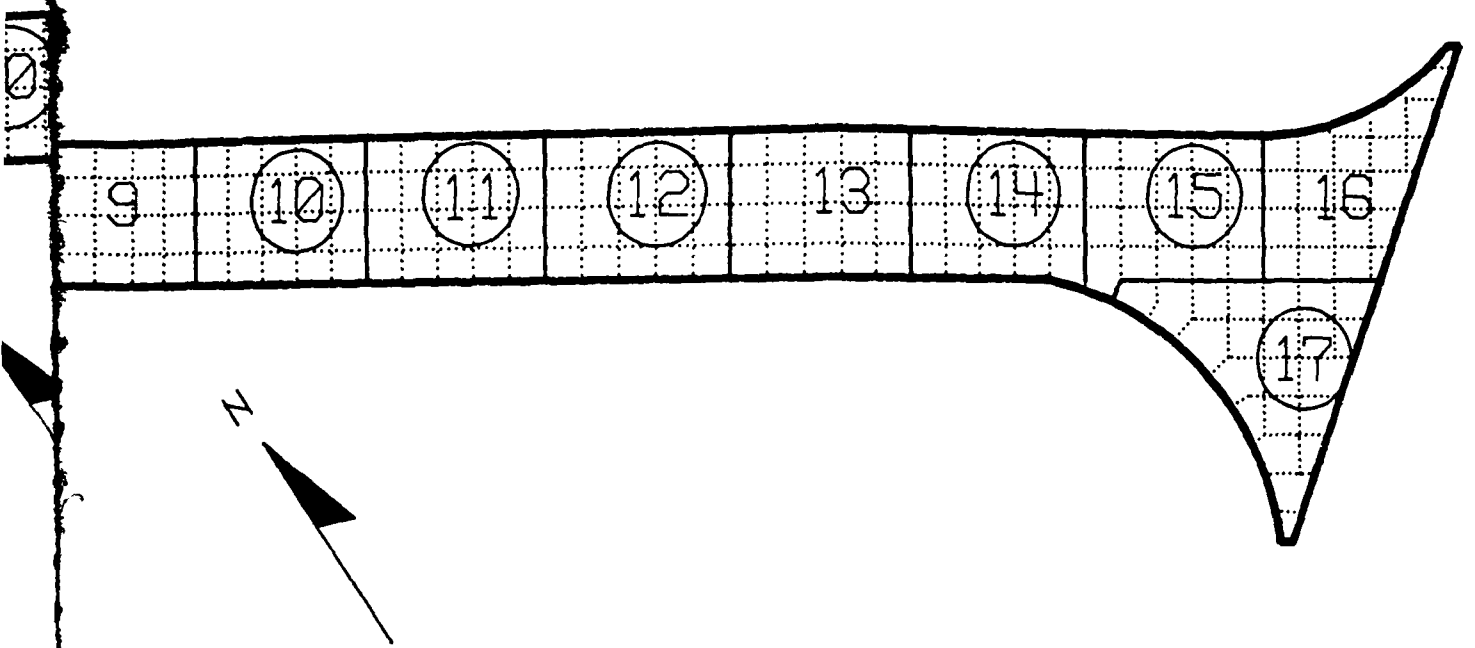


Figure 52. Sample unit layout, dan



ous

t layout, dangerous cargo apron (feature A21B)

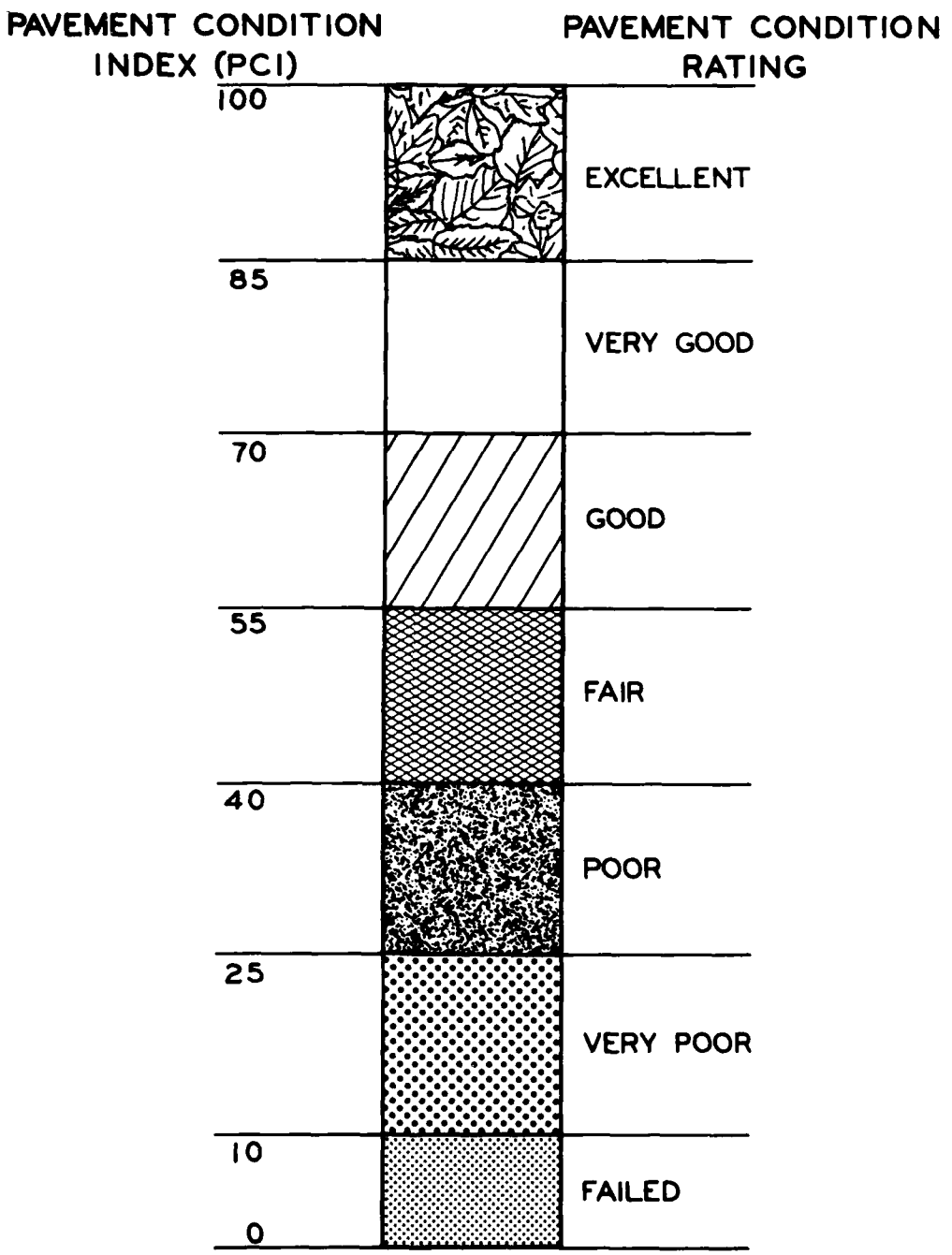


Figure 53. Scale for pavement condition ratings

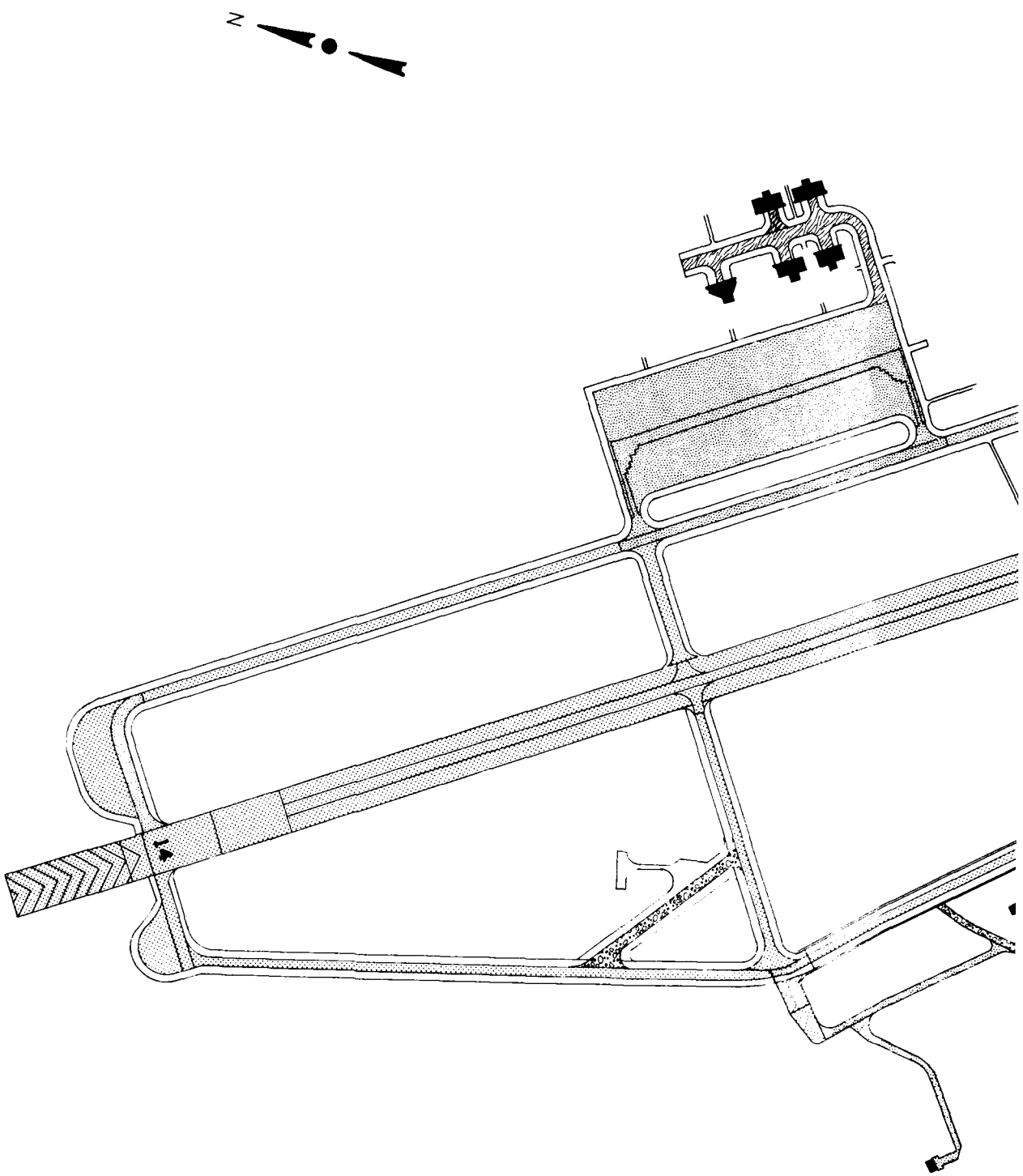
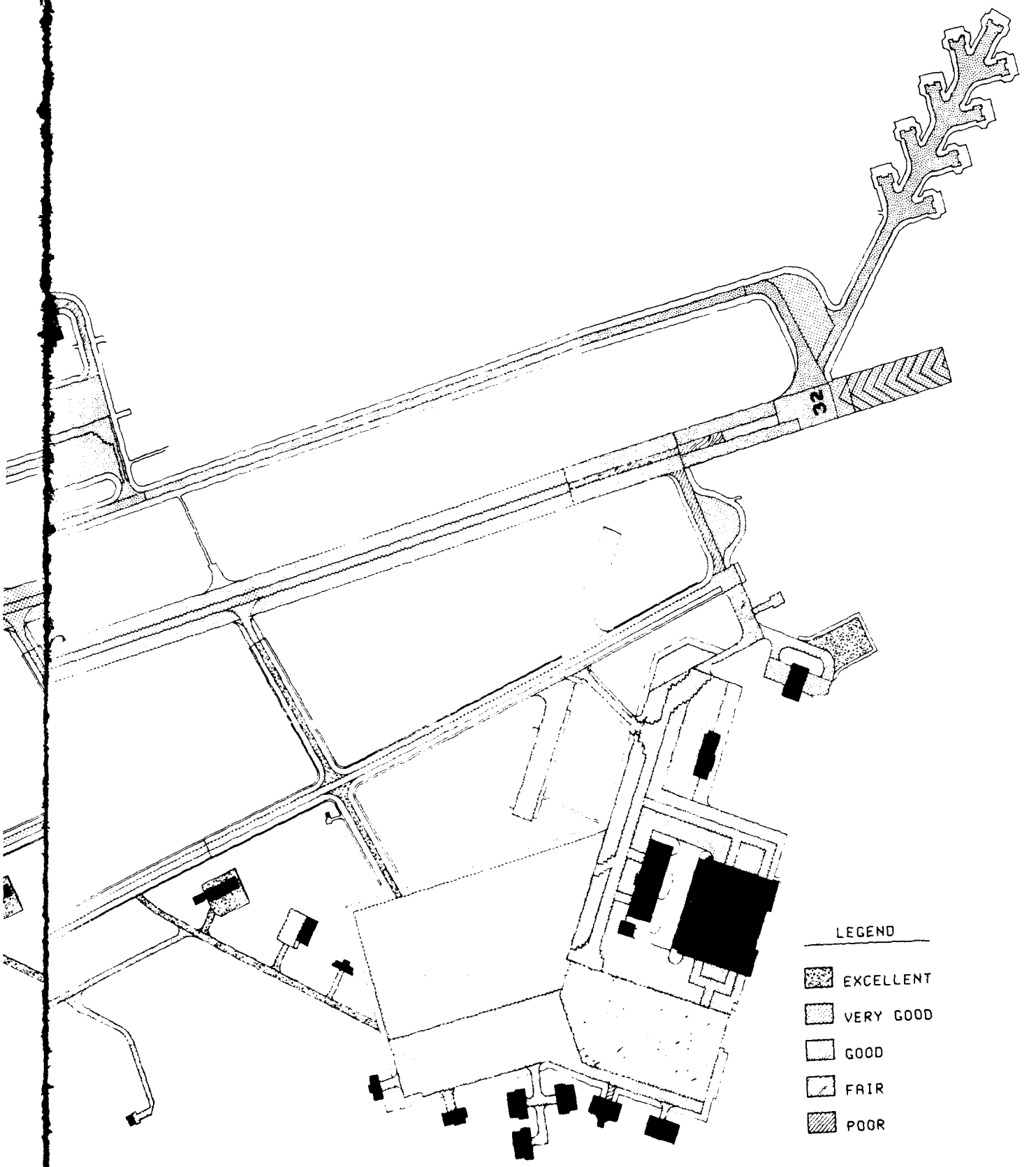


Figure 54. Pavement condition



ing vement condition rating summary of Robins AFB

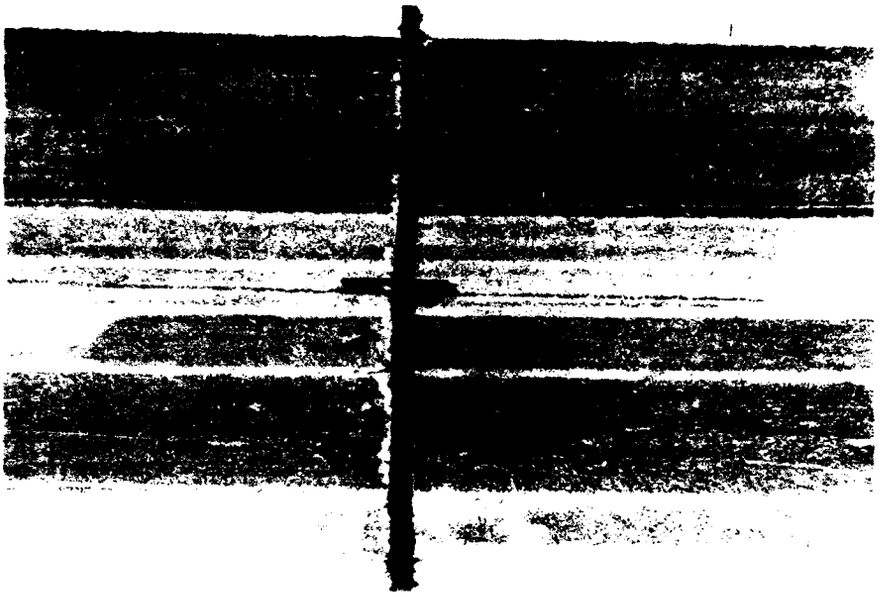


Photo 1. Close-up of typical high severity joint seal damage, Runway 14-32

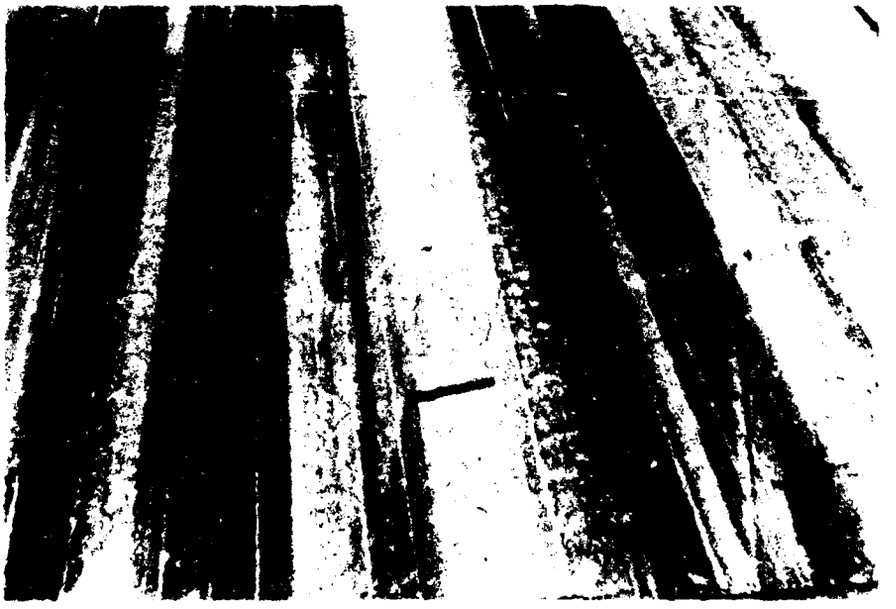


Photo 2. View of typical shrinkage cracking and very light crazing in PCC surface, Runway 14-32

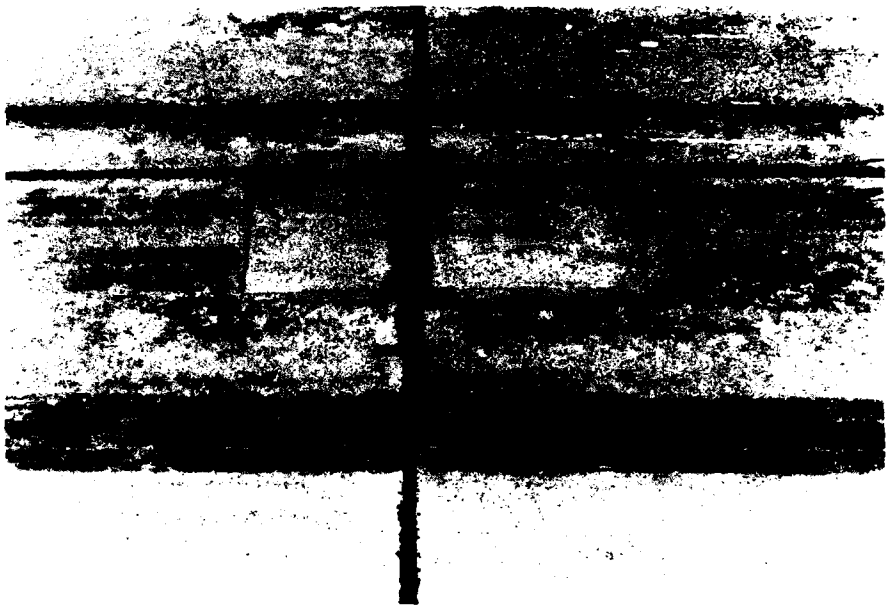


Photo 3. Typical corner spall patching, Runway 14-32

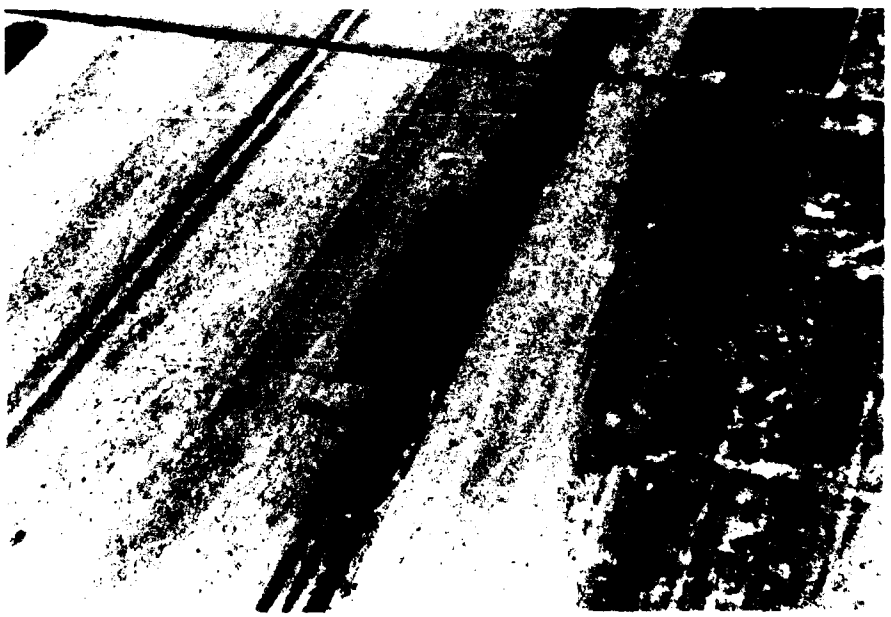


Photo 4. View of typical joint spall patch, Runway 14-32

Photo 5. High severity small patch, Runway 14-32 (R3A)

Photo 6. Low severity corner break, Runway 14-32 (R4A)

Photo 7. High severity corner spall, Runway 14-32 (R4A)

Photo 8. Low severity cracking and patching, Runway 14-32 (R6C)

Photo 9. Typical low severity block cracking, Runway 14-32 (R11D)

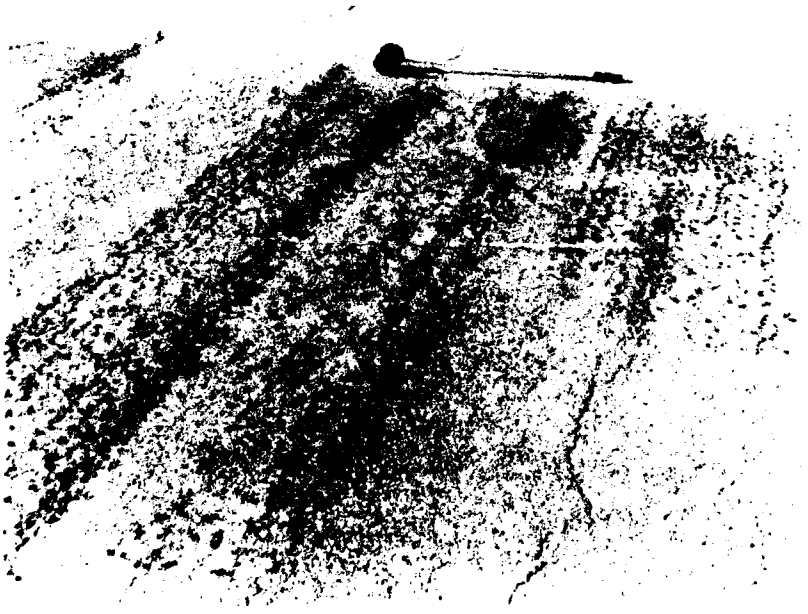


Photo 10. Typical bleeding, Runway 14-32 (R11D)

Photo 11. Low severity transverse reflective crack, Taxiway 1 (T2A1)

Photo 12. Low severity reflective and block cracking, typical of Taxiways 1 and 3 (T2A1, T2A2, T3A, and T4A)

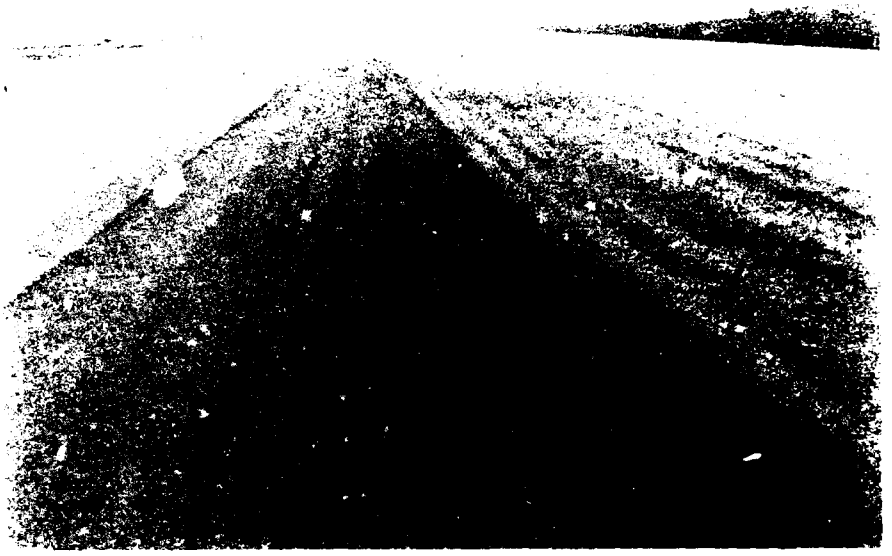


Photo 13. Low severity longitudinal and transverse and block cracking, Taxiway 4 (T5A)

Photo 14. Typical low severity block cracking, Taxiways 3C and 3D (T40C and T39C)

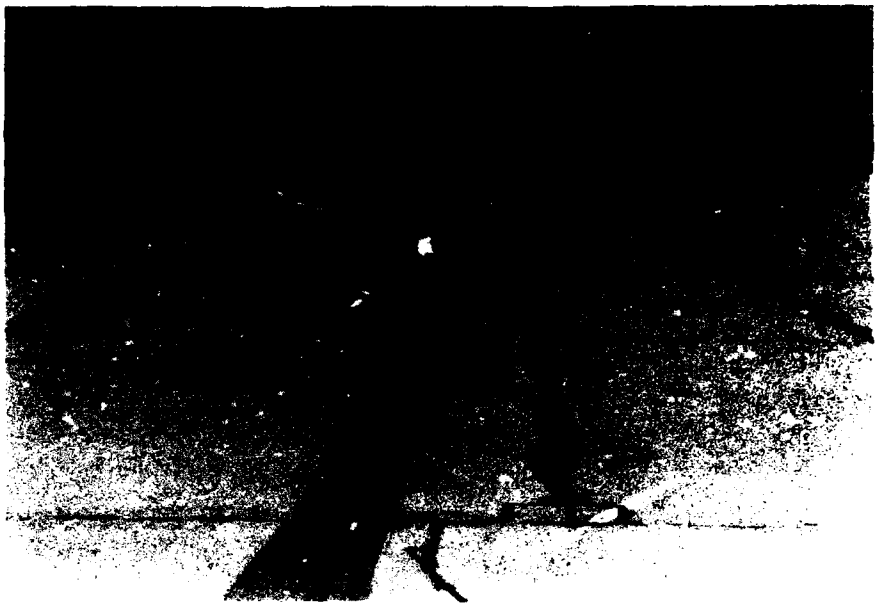


Photo 15. Low severity cracking and patching, Taxiway 1A (T1A)

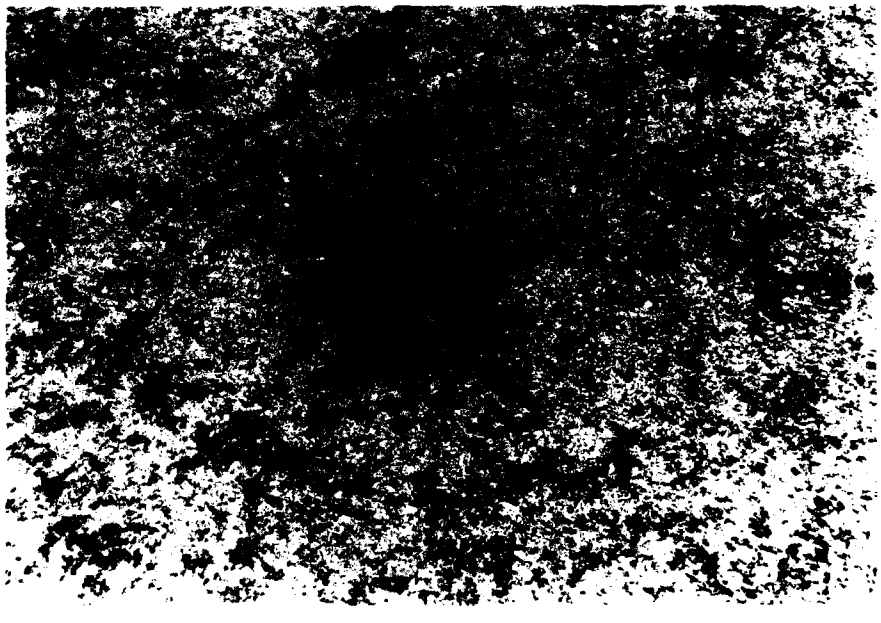


Photo 16. Typical low severity patch seen in all SAC-side features

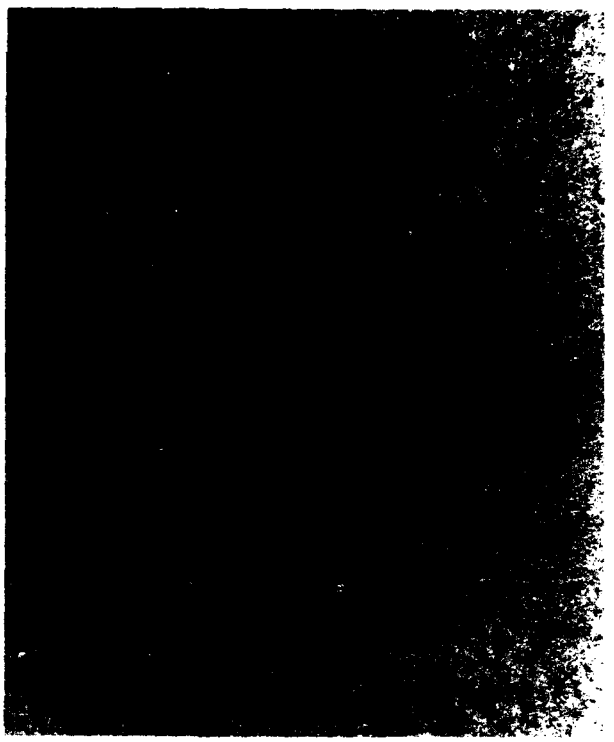


Photo 17. Shrinkage crack, typical of those seen in SAC-side features

Photo 18. Low-severity linear crack, which developed from a shrinkage crack, Taxiway 5A (T11A)

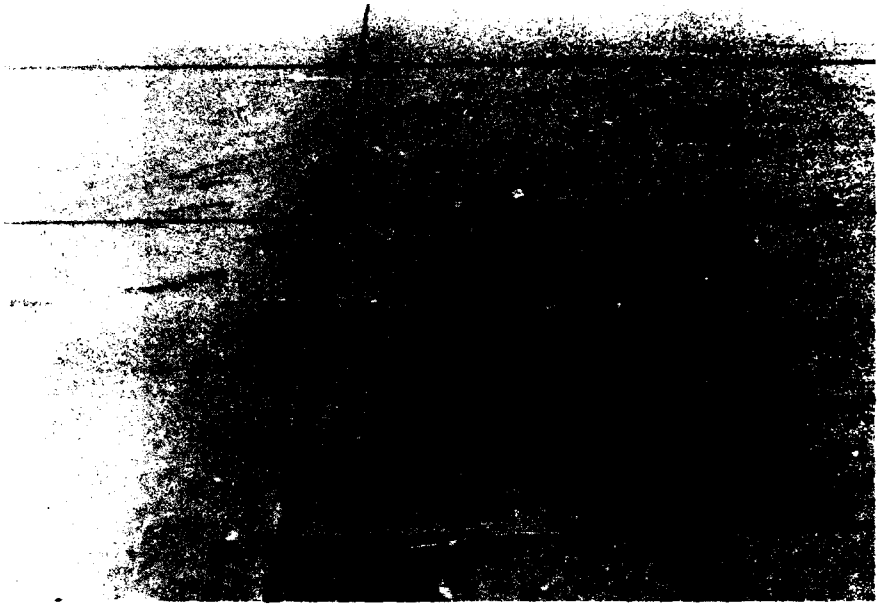


Photo 19. Typical patches as seen in north, northwest, and west aprons (A4B, A5B, and A6B)

Photo 20. Depression and cracking associated with drainage structure subsidence, northwest apron (A5B)

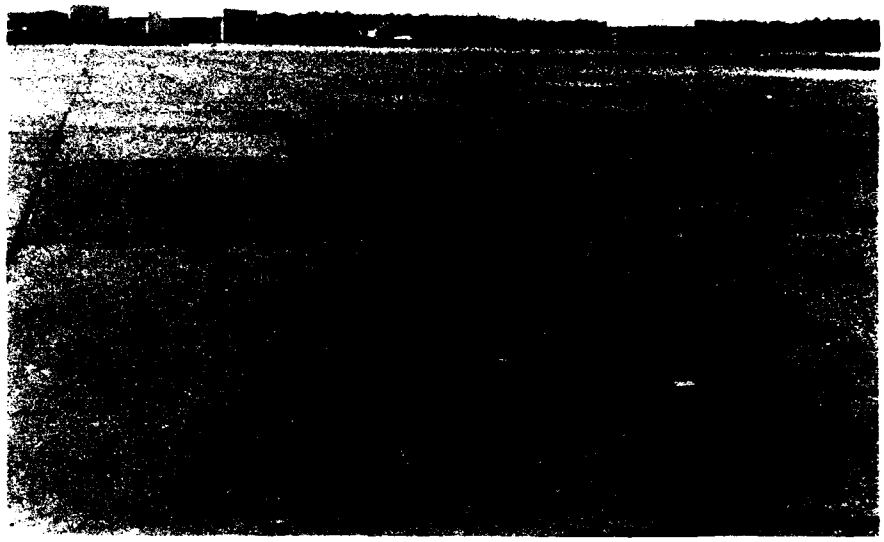


Photo 21. Typical replacement of two small slabs with one large slab, original apron and taxiways (A10B, T15A, T26C, T27C, and T28C)

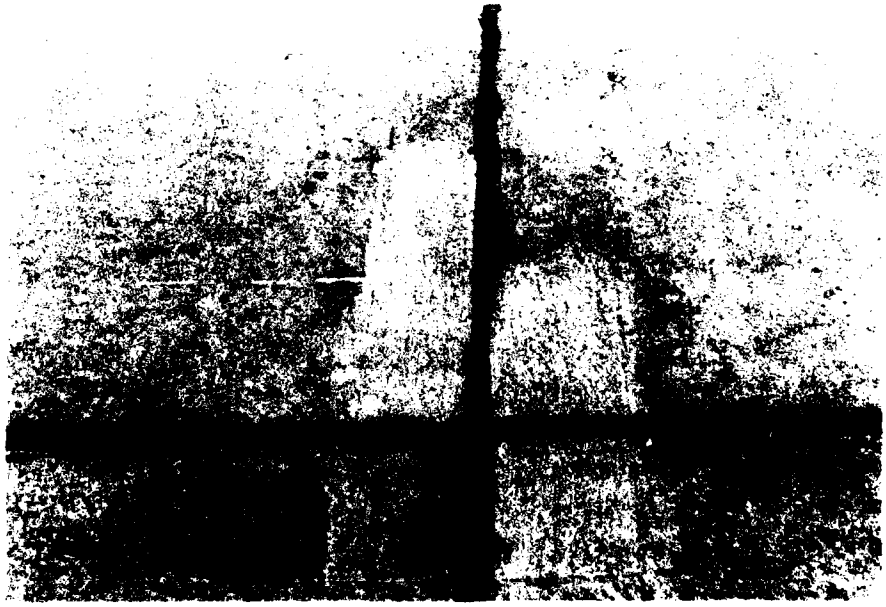


Photo 22. Typical patches, original apron and taxiways and south extension apron (A10B, T15A, T26C, T27C, T28C, and A11B)

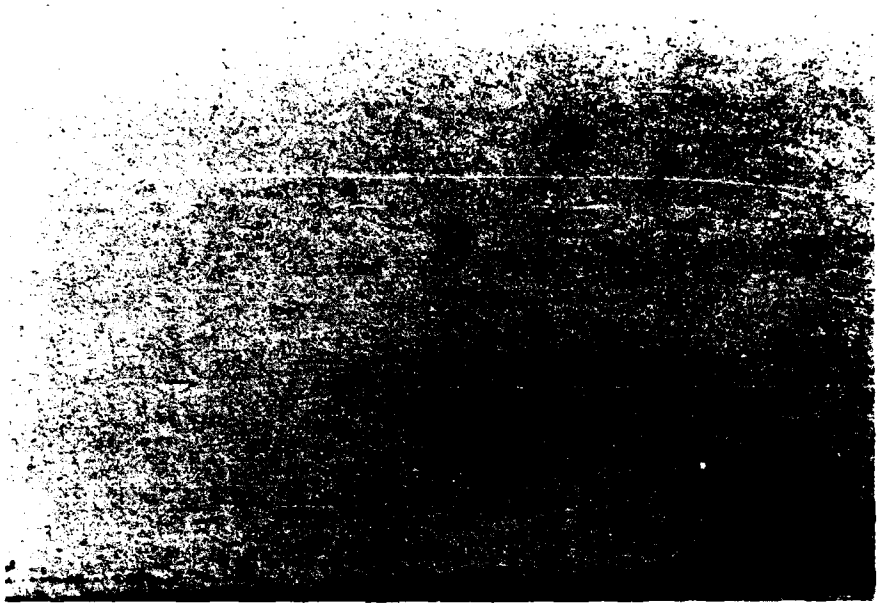


Photo 23. Shrinkage crack and very light crazing typical of surface in original apron and taxiways and south extension apron (A10B, T15A, T26C, T27C, T28C, and A11B)

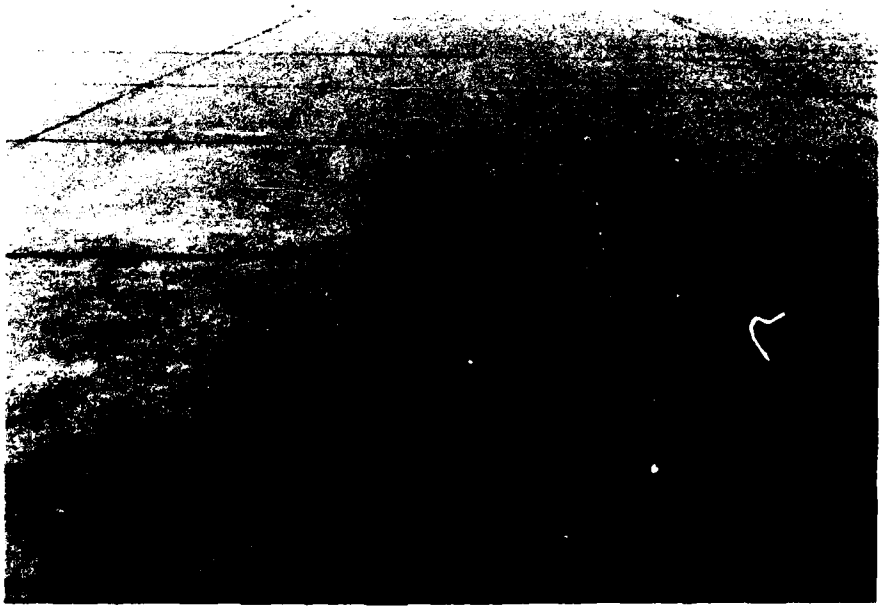


Photo 24. Low severity linear crack and patch, original apron (A10B)

Photo 25. High severity spall adjacent to low-severity patch, dangerous cargo pad (A16B)

Photo 26. Low severity linear cracking in new PCC surface, dangerous cargo apron (A21B)